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Sixty-Ninth Year.

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BEFORE WOOD CHOPPING BEGINS

WHAT OUR READERS THINK & DO

COMMUNITY WORK, NEIGHBORLI- NESS, IN THE SOUTHEAST.

Editor, Rural World:—About once or twice in a decade the farmers are able to wind up crop gathering before the Christmas holidays, and this was the second one for over ten years; the other being the year of 1912, when, as this, a very short crop of cotton was everywhere the rule.

Our snows are few and far between here, and seldom stay with us for very long. And we are told that it is a scandal, that we make so little use of our very mild and moist climate; and I guess it is true, still one has to try the experiment to know what a task it is to make cotton picking and grain sowing "gee horses." With your means of liquidation of your debts receiving whatever kinds of weather may be coming at the time, though it runs in one's mind that his land is, and his livestock will be, maybe, later, suffering for cover from the vicissitudes of weather—the animals, of course, will suffer from a lack of the proper feeds, that we can grow, and from the improper kinds that we are buying, and at a much dearer price than we could make it for—it is, so-to-speak, a case of being between the devil and the deep blue sea. But, our dilemma notwithstanding, many of our so-called "cotton farmers" are gradually working into winter farming; and as the new order is understood and its advantages appreciated, it will gather momentum and another decade should see its general practice.

One of the greatest blessings of this life is to be surrounded by a lot of good neighbors, understanding and understandable, wideawake and public spirited; no other one thing will make of the joy of living; and other one item that will water neighborhood progress. Neighborly intercourse may be had under other than ideal conditions; but when it comes to putting the community into the list of topnotchers, its a matter of "team work," and this can't be had without a "community of interest" spirit—one ideal, and all with the same idea of how to reach it.

Lucky—or maybe, "favored," is the appropriate term—is the mortal that has his domicile in a locality where "we are one and each is one of us;" such a neighborhood gets what is coming to it of what this life has to offer in the way of conveniences, and the other worth-while things. "Team work" puts a smoother way for us on the highways that lead to the markets and to the other neighbors; to the school and meetin' houses; and it replaces the ramshackled, unpainted, and all but uncovered and unsided pneumonia-breeding blots-on-an-otherwise-lovely scene, with the kind that you are proud to have your children attend five days in the week for as many weeks in the year as good judgment has told you is proper—and the kind you want to attend with all your family once a month—and the kind of buildings, too, that you care to have the traveler look on as he is passing through.

But "team-work" means that all must work, and work willingly, whenever there is work to be done; it doesn't and must not, mean that a few, or even the majority, must carry the load and the balance on top of it. "Let there be unison" in all things of a pub-

lic nature at least. But there must be a getting-out of the rut, a "breaking away from the old order," and doubtless this calls for some one to "move;" but the move should be "seconded" and let there be a unanimous seconding, once one is found to make the initial step.

Down in "wiregrassland" we have some of the most progressive, wide-awake and worktogether neighborhoods that may be found between this and the other world; but, on the other hand, there are those that have yet to awake from the comma of standstillism. Not much of the primevalism of the commonwealth's founder's time is still to be seen, it is true, but this is more because of the law of need that multiplication of numbers makes, than because of the love of beauty and the desire for progress. And I am afraid that only the "law of necessity," affecting those of another section, will cause them to come, unwillingly, it is true, into such a neighborhood in order to get the land for a farm and home,—the law of supply and demand having denied it them in the favored communities,—whence they are compelled to search in other corners for that which they desire; and by their precept of industry and example of progress, wake the neighbor-natives to a realization of what life is for, and to what may be theirs if they so will it and work to that end.

We are told that, "The way of the transgressor is hard," but I very much doubt its being any harder than that of the "preacher of progress." And, that "A prophet is not without honor, save

in his own country;" but very few of the prophets for the newer agriculture have found the natives flocking to hear their doctrine with the purpose of taking it for their own, let them come from ever so far and in any garb they may.

Just one suggestion I have to make to the prospective home-seeker, and that is: Never buy land anywhere or from any one until you see it, have legal advice as to whether or not good titles may be secured; and be sure to investigate its physical possibilities, which, or some idea of which, may be obtained through questioning those living around it. One can easily form a wrong opinion of land, and be led in-

to believing it good—or bad, as the case may be—by seeing it under one condition of the weather. So, if it is not convenient to view it from both weather angles, get the views of others near by.—R. M. McDaniel, Georgia.

"DON'T DO IT."

'Twas only a little sentence;
From unknown lips it fell
While a crowd on street was passing,
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Of a word or two's a sermon
And changes the life of a man,
And life is the sweeter and better
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COLMAN'S RURAL WORLD

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ST. LOUIS, MO., JANUARY 5, 1916.

SEMI-MONTHLY.

To Know the Value of a Cow

One Must Know How Much It Costs to Keep Her---Figure Carefully the Cost of Feeding
---Nothing Gained by Guesswork---Use the Scales.

By W. M. Hardy, Illinois.

WE cannot tell the value of a cow unless we know how much it costs to keep her. This is just as important as it is to know how much milk she gives or the quality of that milk. A man is apt to think that because a cow gives a large amount of milk she is the most valuable one in the herd and yet he is not warranted in his judgment until he knows the comparative cost of keeping her. One cow will produce more milk than another but, when we figure carefully the cost of feeding, it sometimes happens that the large producer has not made us as great a net profit as some others.

Some people do not like small cows. They say one cannot make them believe that a small cow giving a moderate flow of milk is worth as much as a large animal that gives a greater flow. This, however, is simply guessing at results or being carried away by one's fancy. The little cow may not produce anywhere near as much milk or butterfat as the large one, but it is quite possible that she makes us a larger profit on the investment.

Nothing Gained by Guesswork.

One of the great troubles with dairying as with many other things connected with farming is that we are too apt to guess at results. We do not figure carefully enough. The average man is likely to think there is too much bother connected with estimating the cost of feed for each cow for him to consider the question seriously.

I do not pretend to say that one can estimate the cost of feed within a cent or two, but he can get at it close enough to know whether or not his cows are making him a profit and whether one animal is better than another. I know from practical experience that it is not so very much bother either.

Suppose a man is feeding alfalfa or clover hay to his cows. If he feeds them carefully for several days he knows just about how much each one will eat in a day. He feeds about the same amount after he learns how much the cow needs and he knows that one cow needs considerably more feed than another. Now when this has been determined, weigh what one cow eats in a day and multiply this by the number of days that she is fed alfalfa or clover hay. That will give approximately the amount of hay the cow eats.

Use the Scales.

It is the same with the grain ration. It is not necessary to weigh the grain at every feed when as nearly the same amount as possible is fed every time. Weigh it once and then multiply by the number of times the feeding is done. If the ration is changed the estimate must be made again.

In this way with very little trouble one can get an idea of the cost of feeding each cow. Then if the milk has been weighed and tested for butterfat one has data whereby he can distinguish between the poor and the good cows, between those which have brought a profit and those which have made a loss.

I figure that \$60 will feed a cow producing 10,000 pounds of milk for one year. The feeds that grow on my farm are alfalfa, clover, silage and oats. The feeds that I buy are oilmeal, cottonseed meal or gluten meal and bran. In arriving at my cost of \$60 per cow a year I figure the feeds grown on my farm at their full market value. I value the silage in accordance with its feeding value as compared with purchased feeds.

Sixty Dollars a Year for Feed.

My cows yield an average profit of \$40 a year. I

know that some cows will yield better than this, but most keepers of cows do not get this amount of profit because their cows are not good enough and, of course, they cannot afford to feed \$60 worth of feeding stuffs in a year. So the first essential in profitable dairying is good cows. A cow that will yield 10,000 pounds of milk in a year is a good one, and she must be well fed.

When I commenced to keep cows several years ago I did not feed as well as I do now. I have been paying close attention to the feed bills since, and while I do not claim that my methods are absolutely correct, I am thoroughly convinced that good feeding pays big. I have found that the nearer I feed a cow to her full capacity the less energy she will waste for, when she gets full, she will lie down and chew her cud in contentment.

More Feed Means More Milk.

As to what a maintenance ration would cost I am not at all sure about that. If I had a cow that I

intended to keep for 10 years without milking or fattening her, I should judge her annual cost would be about \$25 to say nothing of her care. For 10 years this would amount to about \$250 in addition to the work of caring for her during this period. Suppose we add \$15 worth of feed to the \$25 estimate. The cow would probably pay for her keep and perhaps she would return a little profit besides. For that extra \$15 she would produce about \$35 worth of milk.

So far we have but little if any profit for ourselves. We must get the profit by adding more expense. Of course, it comes from what the cow can consume over and above her maintenance. Suppose we add to her maintenance ration \$25 worth of feed. A well-bred dairy cow will return for that extra \$25, \$50 to \$60 worth of milk. If we add \$10 worth more feed we will get more milk in proportion. Hence with good cows more feed means more milk, and more milk means more money to add to our bank account.

To Determine How Much Milk Cow Gives, and the Quality

NOT long ago I heard a dairyman say that he had as good a cow as there was in the country.

He had just gotten a Babcock tester, made a composite test of four days and weighed the milk at each milking. The cow gave 45 pounds of milk per day which tested 8 per cent butterfat, making with 16 per cent overrun, 4.17 pounds of butter a day. I told this man that I did not doubt his word but was afraid that he was not careful enough in taking the sample. He then said that after each milking he took a sample off the top of the milk with a teaspoon. I asked him if he did not pour the milk from one pail to another and he said that was not necessary because he took the sample as soon as he was through milking. Now right here is where he made a mistake.

After showing him the proper way of taking the sample he found that his cow tested only 5.5 per cent. Still she is a good cow, but, instead of making 4.17 pounds, she made only 2.86 pounds of butter a day.

Weigh Milk Every Day.

The best way to determine the amount of butter is to weigh the milk at each milking every day in the year that the cows give milk. I know that many dairymen argue that it is as satisfactory to weigh the milk for four consecutive days, that labor is too expensive and will not pay for the extra time, and so on. But I think those readers of the Rural World who have tried it out have found, and I know from practical experience, that most milkers will take a little more interest in their milking and try to make their cows outdo the other fellow's and that the weighing and recording the figures will not consume one-half minute to each cow. This gives us a record that shows up the individual and we do not have the best or the worst four days of the month. If a cow is fed and handled properly a four days' consecutive test is quite satisfactory. I use the word "quite" because no matter how well a cow

is cared for there will be a slight variation.

As soon as the milk is drawn from the cow it should be poured from one pail to another. The fat globules are constantly working to the top and, no matter how fast the cow is milked, the top will be somewhat richer than the rest of the milk.

The Babcock Tester.

In buying a Babcock tester one should be sure to get it from a responsible manufacturer so that the test bottles will be properly gauged for accuracy and it should have a speed of at least 1,000 revolutions a minute. A speed of less than this will not as a rule separate the solids that have been burned up by the acid from the fat.

Before taking the sample from the jar with the pipette give it a rotary motion so that all the fat globules will be thoroughly mixed with the milk. It must not be shaken as this would introduce air bubbles and they would be drawn into the pipette and occupy space that ought to be occupied with milk and thus the cow would be cheated. On the other hand, if the sample is taken without the rotary motion too large a proportion of fat globules will be taken into the pipette and consequently will give the cow too much credit.

Use Acid of Proper Strength.

Sulphuric acid at the proper strength for testing can be purchased at reliable drug stores or from dealers in dairy supplies; the proper quantity to use is 17.6 cubic centimeters or the same quantity as of milk. If the fat is charred the acid is too strong and should be diluted with water or a smaller portion used. Sometimes we get acid that is too weak and will not burn up all the solids other than fat and then more will have to be added. The acid and milk must be thoroughly mixed before placing in the machine.

Then run the machine for five minutes fill up the bottles with hot water (distilled water is best) and (Continued on Page 4.)



A Herd of Dairy Cows, of Holstein Blood, That Any Farmer Would Be Proud to Own.



A Show Herd of Ayrshires, the Breed That Stands for All-Round Adaptability and Usefulness.

Practice New Methods of Crop Management

By Henry F. Thurston, Illinois.

NEW ways of crop management are practiced by Clark & Bledsoe, of Mexico, Missouri, the owners of six farms in that vicinity that aggregate 4,000 acres. The staple crops are grown principally, while much attention is given to live stock. C. F. Clark, the head of the company, is bringing modern methods into practice on all the farms.

He follows a long rotation of corn, two or three years, wheat or oats, followed by blue grass or by clover and timothy. He is growing a good deal of clover, but says: "If we're going to raise clover in this country and want to be sure of success, we find that a good liberal use of lime rock will insure it."

Quick Growth of Clover.

"We sowed some clover in wheat last spring, and it made remarkable growth, so much so that we cut off one good hay crop and cut the second growth for a seed crop. This result is generally obtained the second year. I think this unusual development is due largely to the fact that we put one and two tons of lime rock on that ground. We noticed that where we put on two tons, the yield of clover was nearly double what it was where we put on one ton, which shows that the quickly available lime in a ton of lime rock screenings is not enough to neutralize the large amount of acid in our soils. The increase in the very first crop of clover will pay the entire cost of applying the two tons of rock per acre, which will, perhaps, be good for from 10 to 20 years."

Plows Deep.

"We plow our ground deep so that it will not wash with the heavy rains, and it gives a better seed bed. If you plow your ground shallow, it will wash, if it is of a composition that is liable to wash. We often have another reason for deep plowing, and



Fertilizers Did It.

that is to thoroughly bury the mass of weeds that has sprung up after the preceding crop. We think that those weeds are a valuable asset to our land. In turning them under, we use large plows and chains and break down the weeds so they can be gotten under. We plow about eight inches deep if we can, taking time enough to do the work well."

Fertilizing Corn.

"We use fertilizer on corn, checking the fertilizer in the hill. As we plant quite early, we feel sure of getting enough rain to dissolve the fertilizer in the hills, and this gives the corn a strong start. We also find that where we put the fertilizer in the hills it is a protection against the cut

worms, and that is a matter of great importance."

Fertilizer on Oats.

"Fertilizer produces good results on oats because it is readily available, which is very important, for the oat crop completes its growth earlier than corn. When I have made a good strong application of fertilizer on oats, I have noticed the effects on other crops for five years afterwards. We use fertilizer on wheat and corn. On fertilized wheat, we never fail to get a good stand of clover."

Rye a Valuable Crop.

"As valuable crop as a man can raise here is rye,—hog it down in the winter and turn it under in the spring. Sow fertilizer with the rye. For hogging purpose the rye should be sown the last part of August or the first part of September. I do that every year. We sometimes sow it in the corn or in fields where the early corn has been cut off. But I would rather sow it after wheat or oats on ground that I am going to use for corn. We sow at least two bushels to the acre, to get a good thick stand of rye rather than of weeds. I plowed some rye ground for corn from the first to the 15th of June last year, and the corn did wonderfully. I find when I turn my rye under for corn that I save several cultivations of corn. The ground is so free from weeds that two cultivations will suffice, so far as the weeds are concerned."

Pasturing Rye.

"If you turn hogs into the winter rye they grow and keep healthy. If you turn in sheep they get mud fat. Calves do well on rye in the spring. You can hardly figure how valuable rye is when well-fertilized and used in that way. The first crop of weeds in the spring is the big crop. They usually get started in April and May and they keep coming up all through the season. But in the rye field that is pastured, they never more than get a start, and are all killed in plowing. Then when the corn is put in, the ground is all clean and the corn gets a quick start. I had last year, on land so managed, corn that made 60 bushels to the acre."

Young Stock Needed.

"To get the benefit from this system of using rye to precede corn, one must have young stock. Without young stock one would have to cut the rye, and that would increase the cost. It is better to have light stock, like calves, sheep and hogs, rather than cattle, as the cattle, in the spring of the year, when the ground is soft, will tramp it too much. We have more than 500 hogs of all kinds."

"I have lived in this county 48 years and have been using fertilizer for eight or 10 years."

HULLESS OATS.

Hulless oats have the peculiar characteristic of shelling out free from the hull when threshed. They have never been extensively grown and their value is not generally known. In determining their worth it should be understood that their feeding value is somewhat greater than ordinary oats, as the ordinary varieties may have as much as 30 per cent hull. However, to furnish an amount of food substance per acre equivalent to other varieties they should produce a yield of 70 per cent by weight of the varieties commonly grown."

The Washington Experiment Station obtained a small quantity of hulless oats from the United States Department of Agriculture in 1904. These and other hulless varieties have been tested with the ordinary ones, which have hulls on, for the past several years. The average yield for a two years' test in the grain nursery shows that Chinese hulless oats, one of the most common varieties, produced 43 per cent of the yield of Swedish Select oats. An improved hulless oat, which

was produced at the Washington Experiment Station by crossing the Chinese hulless on the Palouse Wonder oat, produced 72 per cent of the yield produced by Swedish Select during the same two years."

The best hulless oats under field conditions produced only 53 per cent of the yield of Swedish Select. Besides producing a low yield, most of the hulless variety have a tendency to shatter badly, and are often susceptible to smut, thus further reducing the yield of the harvested crop. Attempts are being made to improve these hulless varieties by crossing them on some of the better yielding varieties. Until hulless oats are further improved they would hardly seem to be worthy of attention from the grower, except where they are to be used for a special purpose."

DRAINAGE—TYPES OF TRENCHING MACHINERY.

Some form of trenching machinery will prove a profitable investment, according to engineers in the United States Department of Agriculture, if the landowner has more than 100 rods of tile drain to lay in soil that will require picking but which is free from rock. Ditching plows that can be purchased for \$18 to \$20 will prove of material assistance in such work. If as much as 1,500 rods of tile drain are to be laid, the landowner will be justified in purchasing a horse-drawn plow at \$250 to \$300, provided the soil is free from rock and large roots. The installation of 5,000 rods of drain tile will justify the purchase of a power-driven trenching machine for \$1,500, provided the machine can subsequently be sold for one-half its original cost."

Types of Machines.

The various types of trenching machines are divided, in Farmers' Bulletin 698, a new publication of the United States Department of Agriculture, into four classes: 1. Plows and scoops, 2. wheel excavators, 3. endless-chain excavators, 4. scraper excavators. The plows and scoops range in price from \$18 for a simple ditching plow to loosen the dirt and make handshoveling easier, to plows costing \$300 and fitted with devices for lifting out the dirt and trimming the trenches. The other three classes are usually elaborate machines costing \$1,200 to \$6,000, which may not be profitable investments for the average farmer who has only a small amount of draining to do. However, where there is much drainage to be done it will be well for the landowner to investigate the advisability of purchasing some trencher which has a detachable tractor. When not needed for trenching, the tractor may easily be separated from the digging apparatus and used in all the ways in which a farm tractor is ordinarily employed. Another method of securing the services of a power machine is for several landowners to combine in purchasing it."

Efficiency Tests.

"Three things are required of a good trenching machine, namely: 1. It must operate efficiently through various kinds of soil; 2. it must be capable of cutting true to grade; 3. it must work for long periods without breaking or otherwise getting out of order." Probably none of the plows or scoops cuts accurately to grade, and some hand work is necessary to make the trench smooth for laying the tile properly. However, their low cost makes it profitable to employ them on work that would not justify the use of more expensive machinery."

The cost of trenching by machinery must include, besides the expense for operation and repairs, interest on the investment and proper charges for depreciation of the machine. The interest and depreciation charges are continuous whether the machine is working or idle. The real difference in cost of trenching by machinery and by hand is not so great as it is often supposed to be, but many times there are advantages in having the work done quickly or in employing only a few men instead of a large number. The more expensive machines will be profitable if the owners can keep them busy a large part of the time."

FIGHT CHINCH BUGS NOW.

Preparedness against the common enemy, the chinch bug, is urged by A. D. Folker of Jewell county, Kansas, in the following unique and timely appeal:

"Have you noticed the enemy, the chinch bugs? Yes. The wet summer was favorable for their death by the fungous disease. In many places there is a survival of the fittest. Henry Ford's peace plan won't drive them 'out of the trenches,' but a little united 'firing' right now along the roadsides, bunch grass, hollows, etc., will drive them from their winter quarters, and the weather man will claim the victory. This is the ounce of prevention, the safety first doctrine. It won't do any harm to remind your neighbor that this plan is good for him also. That's co-operation, you know."

HAVE AN ICE HOUSE.

Ice is a commodity which almost every farmer can have during the summer months if a little attention is given to the proper methods of storage at



Filling the Farm Ice House.

this time. A common type of ice house and one that seems to give good satisfaction is a pit dug in the ground or on the side of a slope covered with a board roof to keep out the snow and rain and serve as a shade. Straw is used between the walls of the pit and the ice. One instance has been observed where baled straw was used with good results. In the construction of any ice house whether pit or above the ground, the walls should be properly insulated so that they will not admit heat from the outside. Ventilation should be provided for the space above the ice by an opening at each end near the peak of the roof."

TO KNOW THE VALUE OF A COW

(Continued from Page 3.)

til the fat comes to the neck. Run one minute more, fill up again with hot water, run again for two minutes and read as soon as possible."

There is often a difference between the test of the dairyman and the creamery man or cream buyer. We should take into consideration that we are all human and if we are not very careful we will abuse this method of testing so that it will not work to our interest. But if we will be honest with ourselves and follow the system that I have tried to outline there will be no trouble in using the Babcock testing outfit.—W. M. Hardy.

Potatoes that are well sorted and graded are the ones that have the best standing in the city markets. Quality and price are the two primary considerations which count with the buyer. It is easier to sell the best potatoes at the top of the market than it is to sell inferior grades at a price several cents lower than the market level. The freight rate on dirt and small and unsound potatoes is the same as on fine stock. The dealer's margin must be as great, or greater, because of the greater risk and labor in handling the low-grade product."

COLMAN'S RURAL WORLD

A. B. CUTTING, Editor.

Founded by Hon. Norman J. Colman

Published by Colman's Rural World Publishing Co.

1916		JANUARY					1916
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NATIONAL IMPORTANCE OF AGRICULTURE.

Of all industries, agriculture is the most important and deserves the greatest encouragement. The great importance of the part played in the economic life of nations by the culture of wheat was brought out recently by the result of an inquiry conducted under the minister of agriculture for France. Thus, for instance, it is calculated that in the northern hemisphere alone the production of cereals amounts to more than 314,000,000 tons, while the manufacture of iron represents 64,000,000 tons. Agriculture is the chief factor in the economic development of the world.

It is a matter for regret that men of business, and especially men interested in finance, are apt to overlook the preponderating influence exerted every year by the harvests. Yet, from the product of the harvests depends the means which will be at the disposal of all those connected with the soil to purchase manufactures, and, as a consequence, industrial activity is dependent on agricultural prosperity, and, similarly, mercantile prosperity is dependent on both. Thus the abundant corn crop in the United States resulted in a big demand for railroad trucks and engines, giving rise to activities in several other industries.

On the other hand, if the harvest is poor, the farmer and laborers have little to spend, and their limited outlay is felt throughout the whole world of business. It is, therefore, both a patriotic duty and true wisdom on the part of statesmen to do everything possible to encourage agriculture and to make it a flourishing industry.

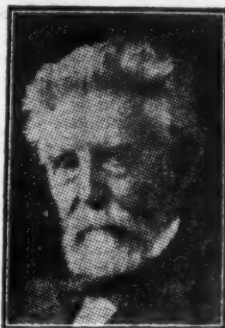
RURAL SCHOOL MORE USEFUL WITH RECREATION.

"Play" in a rural school cannot be too forcibly emphasized. It is an essential in the life of everyone, but especially in his play is the child being trained for future experiences in life and in his or her relation to the community—"the larger home."

The greatest community interest with which the child comes in contact, is that received at the rural school. For perhaps the first time in his life, he comes in touch with differing interests, with outside ideas, with the earliest problems of community life and how best shall he adapt himself to these problems? Just a "book school" may teach educational needs, how to read and write and spell, how to develop the mental side of the child, but a "sound mind in a sound body" ought to convey more to the parents and the school boards than it does. A strong, active, responsive human body can never receive its just due of rightful exercise and pleasure in a dirty, shadeless, unequipped

Colman's Rural World was established in 1848 by Norman J. Colman, who later became the first United States Secretary of Agriculture. As a champion of advanced agriculture this journal has attracted nationwide support, and is today held in highest regard by thousands of intelligent and discriminating readers.

Colman's Rural World strives to bring the greatest good to the greatest number at all times. Each issue is replete with helpfulness and good cheer. It is read for profit and pleasure, and yields a satisfactory return to each individual subscriber. Our advertisers are rewarded with excellent results.



NORMAN J. COLMAN,
First U. S. Secretary of
Agriculture.

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his scrub herd. Furthermore, the quality of the milk has improved, and he demands and gets the price of a first-class article.

The largely increased net income which this farmer now receives from the sale of milk and of purebred cattle is based on the comparatively small changes in his type of farming, which have augmented his business without entailing any increase in the size of his farm.

A comparison of this farm with other dairy farms indicates that the example of this Wisconsin man might well be followed, in general, by any dairy farmer who lives where dairy products are high priced and who has a low-grade herd, provided he has sufficient knowledge of cattle to give high-class dairy cows the care that they demand.

GOOD WINDBREAKS PAY DIVIDENDS.

Windbreaks are usually more or less ornamental on a farm, and add to the contentment of the owner. But it is not generally known that windbreaks are profitable.

It must be admitted that windbreaks occupy space that could be profitably devoted to agricultural crops, and that the roots of the trees and their shade render a strip of ground on either side of the windbreak relatively unproductive. Yet in spite of these drawbacks, efficient windbreaks undoubtedly do more good than evil.

The windbreak reduces the velocity of the wind, and, therefore, the loss of soil water from evaporation from the soil surface and from the field crops. This is equivalent to additional rainfall, just as "a dollar saved is a dollar made." It seems from investigations made by the United States forest service that the greater yields of field crops and apples behind the protection of a good windbreak are enough to warrant every farmer in the prairie states in planting windbreaks.

PROTECT FARM MACHINERY.

More machinery rusts away than wears out on the average farm where shelter for machinery is not given due consideration. If properly sheltered, the uncomplaining farm machine will more than repay its owner for his extra care. If you want to be classed with the thrifty, far-sighted farmers who are realizing the greatest returns from their labor, protect your machinery.

It is a matter of business and economy to protect machinery from the weather. Machinery, like animals, cannot live long if forced to withstand the ravages of heat, cold, wind, and rain. If you house your windmill pump, it is not nearly so liable to freeze up and burst in the winter and if anything should happen to it in zero weather, you will find it a much more comfortable job to make the necessary repairs in a house than out in the cold.

ground, surrounding a school building which in itself needs much remodeling.

The country child is brought up as an individual. He does not learn in his youth the larger lesson of sacrificing his individuality for the "good of the team." The country child need not be denied this one essential that makes, more than any one thing, for a strong, co-operative, harmonious community spirit. Only through games can the child learn this most valuable lesson—only through games taught and practiced and played.

Every country school could have its play-ground—some place for the kiddies to play; and gradually, as the need arose and the interest increased, equipment could be added and much could be done for the betterment of the children of the rural school. With the proper teacher (or perhaps a neighborhood volunteer a day or so a week) games could be added to the regular school program, and who shall say that the boys and the girls are not each learning through their games and play the most valuable lessons in citizenship and their future work in the world?

Another fellow has been telling when to eat an apple. Why not tell a duck when to take a swim?

EXAMPLE WORTH FOLLOWING IN FARMSTEAD IMPROVEMENT.

The size of a farm business is not necessarily measured or limited by the number of acres in a farm. One of the field men of the United States Department of Agriculture, engaged in farm-survey work, reports the case of a Wisconsin farmer, so situated as to make it impossible for him to buy or rent more land, who solved the problem of small acreage by "speeding up" the 80 acres that he had.

This farmer's first move was to dispose of his scrub cows and to replace them with grades and purebreds; next without great expense, he improved the sanitary condition of his barns. He established a cropping system based on corn and alfalfa, choosing the latter rather than clover because on his farm it produces at least 50 per cent more feed per acre than does clover, and is much more dependable.

Pastures have now entirely disappeared from this farm, because its owner has demonstrated that one acre of corn and one of alfalfa together furnish him with more feed than do five acres of pasture. His improved, well-fed herd, housed in a clean, well-lighted, and thoroughly ventilated barn, is yielding him more than double the milk he formerly got from

40 Years Ago 20 Years Ago

In Colman's Rural World

(Issue of January 5, 1876.)

Colorado has within her borders 600,000 sheep, and confidently expects that number to be increased to 1,000,000 in another year.

Two nests of "bumble bees" have recently been sent from England to New Zealand to assist in the propagation of the common clover plant.

(Issue of January 12, 1876.)

Green corn fodder is preserved in France by being buried in trenches.

In Denmark the farmers try the vitality of clover seed by putting some on a knife blade and heating it over a candle. The good seed pops off and the poor seed burns on the blade.

(Issue of January 2, 1896.)

The seedsmen are already in the field with their announcements, and it behooves those who have to buy to carefully figure out what they want and order it. Dimes invested in improved seeds in past years have made dollars for those who invested.

(Issue of January 9, 1896.)

Good cavalry horses weighing from 1,000 to 1,125 and from 15½ to 15¾ hands, will readily sell now from \$140 to \$160.

The fine lands and unsurpassed climate of Missouri are attracting buyers and settlers from Iowa, Kansas, Nebraska and Illinois, as well as the states farther east, who are planting commercial orchards by the acre.

Protecting and Pruning Small Fruits in Winter

AMONG the farm operations which engage the attention of the small fruit grower in the North during the late fall, winter, and early spring are the pruning of the plants and their protection from drying winds, snow, and cold.

Currents and gooseberries have stood without injury the extremes of low temperature and drying winds which prevail in the northern Great Plains region. These fruits, therefore, need no protection against the cold or winds of winter. Sometimes, however, in regions having a heavy snowfall, branches of the currant are broken down by the weight of snow and sleet. This danger may be easily avoided by drawing the branches together and tying them with coarse string. The tying may be done at any time after the leaves fall, but it is better to do this about the time the ground begins to freeze.

Pruning Currants and Gooseberries.

This period between the falling of the leaves in autumn and the starting of growth in spring is the season in which currants and gooseberries are pruned. The ideal currant bush at which the pruner should aim has six to eight main branches, while the gooseberry has eight to 12. None of these branches should be over three years old. Two or three of the main branches of the currant and three to four main branches of the gooseberry should be removed each season, the older branches being cut out and a like number of the most vigorous canes of the current season's growth left to take their place. All other young canes and all canes bent to or near the ground should also be removed. If this system is followed each year after the bushes reach the age of three years, pruning will be relatively simple and the plantation kept in good condition.

Raspberries and Blackberries.

Raspberries and blackberries need protection in many parts of the North where low temperatures and drying winds prevail, especially where the snow covering is light. Certain varieties need protection, while others endure the same conditions without injury. Experience will indicate which varieties need this. Where the cold and drying winds are severe, canes of the tender varieties must be covered with soil. This should be done as late as possible, yet before the ground is frozen. Some of the soil should be removed from one side of the row either with a hoe or plow, the canes inclined to that side until they are in a horizontal position and then entirely covered with soil to a depth of two or three inches. As the canes of the blackberry are more brittle than those of the raspberry, they must be bent over with great care. Often in practice the canes are bent over so that the top is alongside the next hill, some soil thrown over the ends of the canes in order to hold them down, and the remaining parts covered by the use of a spade or by throwing a shallow furrow over the canes with a plow. The canes should be uncovered in spring before the buds start, but not until after all danger of hard freezing is past. Straw and other similar materials have sometimes been used to cover the canes, but are unsanitary, as the air circulates through them and does not prevent winter injury.

When the snowfall is heavy throughout the winter it may cover the canes sufficiently to afford all the protection that is needed. Sometimes, however, in order to be adequately protected by the snow, the canes should be bent over. They may be held in this position by placing a few clods of earth on the tips; or sometimes forked sticks are used to pin them to the ground. In other cases rails or poles are placed across the canes to keep them in a reclining position. The tips, which are the tenderest part of the canes, should be nearest the ground and be best protected.

Pruning Bramble Fruits.

Usually no pruning is given either the raspberry or blackberry just be-

fore or during the winter. When the canes are to be protected with soil, however, all the weaker canes, as well as stronger ones not needed for the crop the following season, should be removed. This thinning out of the canes will reduce the cost of covering. In the spring if the canes of the raspberry are long and are not to be supported by stakes or a trellis, the ends should be cut back. If cut back to a height of three feet, the canes should be able to support their crop, keeping the berries out of the dirt. Sometimes when the canes are slender it will be necessary to cut them back to two and a half feet in length. The side branches of the blackberries are usually pruned back in early spring. The length at which the lateral branches should be left depends on the habit of the variety. In some sections and with some varieties no pruning at this time is necessary, and experience in each locality must be the guide as to this.

Protection of Strawberries.

In all except the extreme southern and western districts early winter is the season in which the strawberry fields should be covered with a mulch, partly to protect the plants from the continual freezing and thawing which occurs in many sections, partly to conserve moisture and keep down weeds during the following spring and during the fruiting season, and partly to keep the berries from contact with the soil when they ripen. This mulch may consist of some kind of straw or hay or of stable manure containing a large proportion of straw, but it should be free from weed seed. Wheat, rye, oat, and buckwheat straw, long-leaf pine needles, prairie hay, marsh hay, salt marsh hay, and other materials are frequently used for this purpose.

The mulch should be placed on the berry field after the ground freezes and before it is covered with snow. If a rain follows the spreading of the mulch, less trouble will be experienced from scattering by the wind. The mulch should be spread evenly over the whole field. If available, sufficient material to make the depth of the mulch when it settles from two to three inches should be used.

Stable manure, though frequently used, is not always satisfactory. In some sections it causes a vigorous growth the following spring and actually lessens the yield of berries. If either the stable manure or the straw contains weed seed, it may infest the berry field with weeds to an extent which decreases the yield and causes much expense in cleaning. When stable manure is applied, the solid portions as far as possible should be put between the rows and that part containing more straw placed over the row. In the spring before the plants start growth, sufficient straw should be removed from the rows to allow the plants to grow through the mulch. This straw may be thrown into the space between the rows. Where the ground is weedy, it will often be necessary to rake the mulch upon the rows of plants and cultivate the field. The mulch is then returned to the middles between the rows of plants to be left until after the picking season.

TO KNOW APPLE VARIETIES.

Farmers and fruit growers often wish to order more apple trees of the variety that has given good results in the neighborhood. If they do not know the name, it is well to send half a dozen of the apples to the department of horticulture of their state college of agriculture. Not less than half a dozen apples should be sent as no one apple could possibly show the range in color and size as half a dozen will, if they are properly selected. They should include the apples of medium size and the larger apples also, and should represent the variations in color and shape which are usually found on the tree.

There are seedling apples which have no names, and which cannot be secured from nurseries. The farmer



strength for business confidence to build upon, exceeding the most optimistic predictions."

Wheat averaged in 1915 over 25 bushels per acre
Oats averaged in 1915 over 45 bushels per acre
Barley averaged in 1915 over 40 bushels per acre

Prices are high, markets convenient, excellent land low in price either improved or otherwise, ranging from \$12 to \$30 per acre. Free homestead lands are plentiful and not far from railway lines and convenient to good schools and churches. The climate is healthful. There is no war tax on land, nor is there any conscription. For complete information as to best locations for settlement, reduced railroad rates and descriptive illustrated pamphlet, address

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Three Hundred Million Bushel Crop in 1915

Farmers pay for their land with one year's crop and prosperity was never so great.

Regarding Western Canada as a grain producer, a prominent business man says: "Canada's position today is sounder than ever. There is more wheat, more oats, more grain for feed, 20% more cattle than last year and more hogs. The war market in Europe needs our surplus. As for the wheat crop, it is marvelous and a monument of strength for business confidence to build upon, exceeding the most optimistic predictions."

who happens to have grown such a tree from seed cannot, therefore, order it from any agent, but can only secure other trees like it by top working, budding, or by getting someone else to do this work for him.

ORCHARD AND GARDEN NOTES.

Hubbard squashes are among the best varieties to keep through early winter. Baked and served like sweet potatoes they are a very delicious vegetable.

Clean straw or other loose, light material, free from weed seed, put on about three or four inches deep, is the best mulch for the strawberry bed.

Cabbages are an excellent winter feed for poultry. The less saleable heads should be pitted in the field to protect from severe freezing and used for chicken feed.

The fall plowed garden will have less undecayed trash and weeds and fewer insects and may be tilled earlier in spring for first planting.

Sweet potato tubers keep best in a thoroughly dry place at a temperature of 45 to 50 degrees. Irish potatoes and most root crops keep best at a temperature as near the freezing point as possible.

Tender canna and dahlia bulbs should not be stored in deep piles as they may heat and mold. They should be stored in shallow boxes or on shelves only one layer deep. If stored where the air is dry, they ought to be covered with enough sand to keep them from withering.

Hyacinths, Chinese lilies and other bulbs which are to be forced in water or pots for winter blooming should be started in a cool, dark place until the roots are well formed; if put in a warm, light place at first the top growth will be in excess of root growth and the flowers will be weak.

Parsnips and salsify may be left in the ground over winter. Enough may be dug and pitted out of doors to use during cold periods in winter when the soil is frozen. An additional supply can be dug during thawing spells in winter from time to time, and the roots saved for spring use, remain in the soil until spring.

In mulching roses and semi-hardy perennials, the mulch should not be put on thick enough to smother the plants. Straw or other light, loose material makes the best general mulch. An inch or two of old, rotted manure, however, may be used on the surface of the ground around the plants beneath the mulch.

If the blue grass on the lawn is getting thin, the best treatment is to apply a dressing of manure when the ground freezes; on most soils fresh straw manure is best. In early spring the coarser parts of the manure may be raked off, and a little blue grass seed sown over the bare spots. Even on bare, newly graded clay, fresh horse manure will not only prevent washing of the soil during winter, but perhaps through its fermentation process bring our Missouri soils into better condition for spring growth of grass than does old rotted manure. Beds of tulips, hyacinths, and other bulbous plants should be heavily

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People's Supply Co., Dept. 217
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mulched with straw manure as soon as the ground freezes. The coarser portions of this cover should be taken off in early spring as the plants begin to push through it.

Those who desire to propagate grapes may make cuttings of the current season's growth when pruning now. These cuttings should be about one foot in length so as to cover the bud at the base. Cuttings may be wintered in a well drained bed, packed in sand so they will not dry out and mulched so they will not freeze during winter. They should be planted six inches apart in nursery rows next spring, one foot above ground.

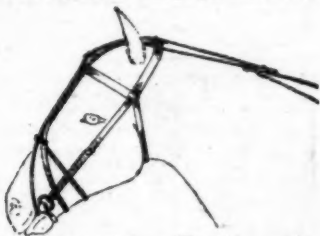
Recent Inventions of Interest to Agriculture

By C. J. Lynde.

THIS series of articles in Colman's Rural World should be preserved for reference. Six inventions are described in each issue. Thus, the reader is given six new ideas in farm mechanics twice a month. Each article describes a farm appliance, each article is illustrated and each article is short and to the point. Tell your neighbors about them and advise them to subscribe for the Rural World.

Overdraw Bridle.

It is stated that this bridle does not pull the horse's head back as does the ordinary bridle, but holds it forward and thus facilitates easy breathing. The overdraw strap passes over the

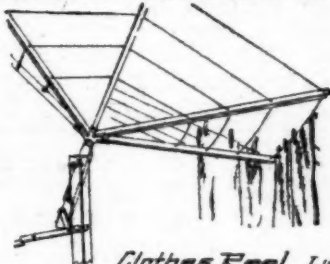


Overdraw Bridle L151

crowns piece and over the middle of the nose band. The metal overdraw bit projects through guides in the nose band and its looped ends are attached to the check rein by overdraw straps.

Clothes Reel.

Women appreciate a reel of this kind because it is loaded easily when tilted into the position shown in the

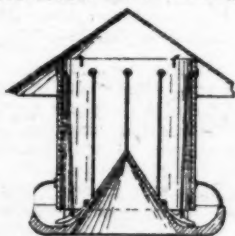


Clothes Reel L152

figure. When fully loaded it is easily raised to the upright position and locked by means of the lever shown at one side.

Hog Feeder.

One difficulty about automatic feeders is that the feed becomes clogged. Here this is overcome by using a forced feeder in each compartment of

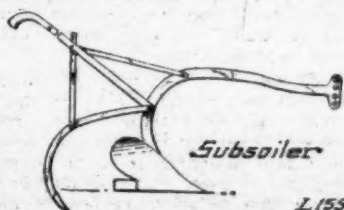


Swine Feeder L153

the trough. Each forced feeder consists of a metal rod attached at the top to the wall of the cylindrical bin and at the bottom to a short lever. The hog, while eating, moves this lever from side to side and this brings down the feed.

Subsoiler.

The figure below shows a simple subsoiler attached to the stock of a



Subsoiler L155

plow. It shows also how the subsoiler can be adjusted to any desired depth or raised above the ground entirely.

Door Spring.

This spring will close a door or gate and keep it closed, or hold it open when it is swung to its full open

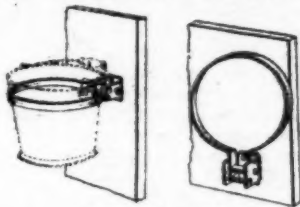


Door Spring L154

position. The upper figure shows a closed gate, the lower one a wide open gate. It will be noticed that one side of the bell crank plate is attached to a stirrup which in turn is attached to the gate post; and that the other side of the plate is attached to a spring fastened to the gate. When the gate is partly open the spring closes it readily; but when it is wide open, the spring lies in such a position that it cannot close the gate.

Pail Holder.

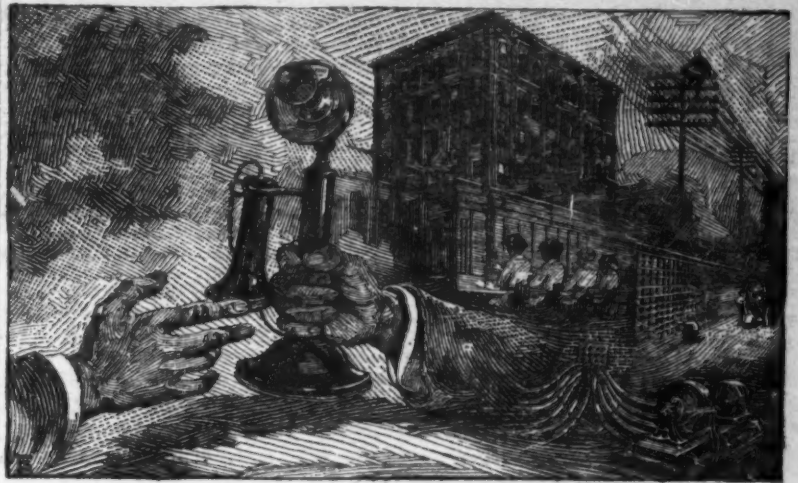
The left hand figure shows the pail holder in use, the other shows it fold-



Pail Holder L156

ed up and out of the way. It is simply a metal ring supported by a U-shaped bracket attached to the wall or other support.

To have every chicken on the farm of one variety looks better and does better than all varieties mixed together in each chicken.



Anticipating Telephone Needs

When a new subscriber is handed his telephone, there is given over to his use a share in the pole lines, underground conduits and cables, switchboards, exchange buildings, and in every other part of the complex mechanism of the telephone plant.

It is obvious that this equipment could not be installed for each new connection. It would mean constantly rebuilding the plant, with enormous expense and delay. Therefore, practically everything but the telephone instrument must be in place at the time service is demanded.

Consider what this involves. The telephone company must forecast the needs of the public. It must calculate increases in population in city and country. It must figure

the growth of business districts. It must estimate the number of possible telephone users and their approximate location everywhere.

The plant must be so designed that it may be added to in order to meet the estimated requirements of five, ten and even twenty years. And these additions must be ready in advance of the demand for them—as far in advance as it is economical to make them.

Thus, by constantly planning for the future and making expenditures for far-ahead requirements when they can be most advantageously made, the Bell System conserves the economic interest of the whole country while furnishing a telephone service which in its perfection is the model for all the world.

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AND ASSOCIATED COMPANIES

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One System

Universal Service

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Strong, beautiful Rocker in a new design; back heavily upholstered with tuck and ruffled roll headrest; center of back finished in a diamond panel nicely tufted as shown in illustration; frame is of seasoned hardwood, finished in best grade of imitation quartered oak; spring seat is 21 inches wide; armrests and front posts are 1-2 inches wide; Rocker upholstered in good grade of black imitation leather.

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HORSE BREEDING AND RAISING

MISSOURI LIGHT HARNESS HORSE NEWS AND VIEWS.

Editor, Rural World:—They are opening the campaign early. In the Country Gentleman of December 25, we find: "Let's eliminate Missouri from the list of states that are classed as dumping grounds for grades and unsound breeding horses. This is the cry of members of the Missouri Draft Horse Breeders' Association, and other aggressive horsemen, of that state."

Missouri stands second in numbers of horses bred and of breeders of the gaited saddle horse of America whose daughters are the best mule mothers in the world, for high priced offspring.

At Carthage is the mother of Royal Reaper, 2:11½, sold to Austria for \$5,000, now in Kentucky, in foal to Peter O'Donna, 2:08, whose son, Don Chenault, placed the 3-year-old trotting record at 2:05½ and afterwards went to Austria as a sire at a long price. Her dam, All McGregor, is at Stotts City, in Lawrence county, Missouri, in foal to The Bondsman, sire of 61 trotters and eight pacers.

Missourians should keep their eyes on the son of All McGregor, sired by M. El Roberts, the blind son of Robert McGregor, eliminated from Nebraska by their "strong stallion law." This blind son of Robert McGregor was, worth more to Lawrence county than all the draft stallions ever owned in the county.

When Europe wants mares to breed, as she will, the fact that they are sired by draft horses, not registered in the records, will not count. Draft horses of any of the draft breeds were not registered in any part of Europe until beginning with Louis Napoleon, imported from France by one of the early American importers.

There is nothing in Missouri that we could get a grade from, with as little intrinsic value, as from the foreign coach horse of any nationality. The late L. V. Harkness sunk a fortune in an attempt to use Indrie, the best French coach horse ever imported, for which he paid \$15,000. Mr. Harkness was broad gauged and assumed that the teachers were right who told that the 3-year-old performances of French coachers under saddle surpassed the world. When he had dropped \$20,000 in the effort he knew the 3-year-old culled from his own farm would not only duplicate their performance under saddle, but would make their best look like 30 cents on the dollar.

Miss Loula Long has lost one of her show horses. Let her forget the English Hackney and his poses, and go out to Fort Collins next spring and select a pair of Wilmering colts, out of German mares. By the time they are three or four years old, Homer C. Spencer will turn over a team that she can use and win in Madison Square or in Liverpool, for she will have the best the world has produced in heavy harness—the pure American bred coach and carriage horse—the goal for all future breeders.—L. E. Clement.

WINTERING IDLE HORSES TO CON- DITION FOR SPRING.

Since idle horses give no return in labor performed, the feeding should be as economical as possible, and proper care should be taken of the animals in order that they may be in the best possible condition for work in the early spring.

Horses should not be confined to the barn during the winter on a liberal supply of grain. It is far better to "rough" them through the cold months. They should be given the run of the yard or lot during the day. This should be provided with a protected shed, one that is thoroughly dry and well provided with bedding. While nature does her part and protects the

horse with a heavy coat of hair during the cold months, the shed is necessary in order to afford the necessary shelter and protection against rains, snow, and cold winds. Winter winds come mostly from the north and northwest, and the shed should be so situated and constructed as to give the proper protection from this quarter.

In the feeding of idle horses the high-priced feeds should be avoided in order to keep them in proper condition at the lowest cost. It has been found that idle horses do very well on a winter feed consisting of all the hay, oat straw, cornstalks, or sorghums they will consume, so that little grain is necessary. Idleness also permits of a more thorough mastication of the feed, thus insuring proper digestion.

From six to eight weeks before the spring work is started the horses should be put at light work and started on a small grain ration in order that they may be in proper condition for the work required of them. The grain ration may then be gradually increased until the regular allowance has been reached for the working season.

Growing colts require considerable protein. They should be so fed as to secure proper development and at a minimum cost. Rough feed, such as clean mixed hay, alfalfa, or clover, may be fed along with a mixture of bran, oats, and corn.

HEAVES OF HORSES—COMPLETE CURE IMPOSSIBLE.

Heaves is a common and annoying disease of horses, interfering seriously with the usefulness of the animal, and consequently detracting from its value. Mainly a disease of old horses, it is essentially the result of faulty feeding and working, especially hard pulling or fast driving when the stomach is overloaded. Gross feeders are frequently subjects of heaves.

While in old, established cases there may be alterations in structure of the heart and stomach, the principal changes are observed in the lungs. These consist first in an enlargement of the capacity of the air cells through dilation of their walls, followed by a passage of the air into the lung tissue between the air cells. Owing to such structural changes, it is impossible to prevent progressive development of the disease, which, however, under proper care, may go on slowly, the animal remaining serviceable for certain kinds of work for years.

Symptoms.

Except in the very early stages the disease is readily detected. The symptoms are those which would naturally be manifested in a condition where the lungs are involved. A peculiar short, grunt-like cough is usually present, and when the animal is exerted a wheezing noise accompanies the breathing. The principal and characteristic symptom, however, is the jerky or double movement of the abdomen in an effort to force air from the lungs. The air passes into them freely, but the power to expel it is lost to a great extent; therefore the abdominal muscles are brought into play.

Indigestion is frequently observed in these cases, and the horse may have a depraved appetite, as shown by a desire to eat dirt and soiled bedding; and there is a tendency to the condition commonly termed "pot-bellied." The animal, though a heavy feeder, becomes unthrifty and emaciated.

A poorly ventilated stable, humid weather, severe work, and overfeeding with coarse, dry feeds tend to aggravate the trouble.

As in this condition structural changes have taken place in the lungs, treatment, as a rule, can only be directed to the relief of the symptoms; and it is not possible to effect a complete cure after the disease is established.

Relief Measures.

In the case of an affected horse it will be an advantage to dampen the food with a mixture of one part of molasses to three parts of water, so that no dust may arise while the animal is eating. It is also desirable to restrict the amount of hay or forage, as large quantities of bulky feed which distend the abdomen, increase the difficulty, and an animal with

heaves should never be driven or worked when full of such material.

In these cases Fowler's solution of arsenic may be given in doses of one ounce in the drinking water three times daily. Ordinary lime dissolved in drinking water (limewater) will be found beneficial. Lime may be added to a barrel or cask of water, and after the resulting mixture has become clear through precipitation of undissolved portions of the lime the limewater may be used freely in watering the animal.

SOUTHWEST MISSOURI'S APPLES AND HORSES.

Editor, Rural World:—Southwest Missouri is a very small part of the world. Years ago I went to Greene county to see a herd of Red Poll cattle, the first herd of this great dual purpose breed I had ever seen. While there I saw a seedling apple, the Ingram, that as good an authority as George W. Tiffin says is the only apple grown that can be shipped to the tropics with any hope of its standing up for use in an average way. It, like the well known Payne's Late Keeper, is a native of Greene county, Missouri. Mr. Hazletine was enthusiastic about his importations of Red Poll cattle and in five years he had sold out and plowed up pastures and meadows and set out Ingram apples and in 15 years his acreage has grown from 30 acres to 500 acres, his sales from a few barrels to almost as many car loads.

Nearly 40 years ago Louis Ferguson set out an orchard of Commercial size, buying from some eastern firm. He set out the trees and, like Topsy, they "just grew up"—some years they bore fruit. All the time they grew a net work of limbs. Trees like Ben Davis, whose roots run along the surface of the ground, died out. It has been a job to clean up the dead wood and prune the living trees, so a sprayer could successfully be used. What remains today is a paying proposition.

Among the heterogenous mixture are three trees, resembling Belleflower in appearance, size, shape and color, with as fine a blush as ever grew on the Maiden Blush. Since they have been spraying, they have had orders on hand for more than they could furnish. Like Ben Davis, its external appearance would sell it anywhere. The flavor is fine, the meat yellow and to me it seemed coarse.

While testing this apple, pronounced by the Frisco expert, an unnamed, unknown seedling, Mr. Ferguson, who knew my weakness, stated that his old black team by Goodwood 4106, almost 20 years old, could and would do more farm work than any three-horse draft team that could be produced, age and numbers not barred. Then there was the satisfaction of hitching the same team to a carriage and moving, they would get any reasonable distance the same day. Barring accidents they will be doing the farm work 10 years hence.

You wonder how a southwest Missouri farmer turned to spraying and pruning—he wouldn't, if he had been content to use a draft team, or had not had two neighbors who are orchard specialists. The wife of one of them said to me: "When we bought this forty, we had lots of bloom, and mighty little fruit. Now we are shipping salable fruit all the time."

When I went up to Stotts City to see All McGregor, dam of Allercorne McGregor, 2:09½, and McGregor Will Tell, 2:16½, she was in Oklahoma, to be mated with The Bondsman. Her General Watts, 2-year-old, is a beauty. Mr. L. L. Beck, an old-time farmer, was as much interested in a seedling apple he has, as he was in the horses. As he told me the story:

About 1867 or 1870, an apple tree grew in a lot where a large bunch of hogs had been fed. When he bought the place and moved on to it in 1882 it bore some apples. In 1883 he put away 20 bushels from this tree. The next year he moved to his present home all he could put on a two-horse wagon with the side boards on, picking them into the wagon. The apple is in color the same as the Ferguson apple, but not as large. It is as fine flavored as any I ever tasted. When the tree began to fail, the scions were sent to Wilds Bros., Sarcoxie, and they have now 100 trees, 15 years old, in bear-

ABSORBINE STOPS LAMENESS

from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone, or similar trouble and gets horse going sound. It acts mildly but quickly and good results are lasting. Does not blister or remove the hair and horse can be worked. Page 17 in pamphlet with each bottle tells how. \$2.00 a bottle delivered. Horse Book 9 M free.

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ing. All in all it is one of the best apples I ever saw. Some day when it gets away from its present environments, it will create a sensation.

An error appeared in the Rural World issue of Dec. 20, when the following statement was made: "Trampfast, 2:12½, is the first 10-year-old sire to be credited with three trotters in the 2:10 list." Gen'l. Watts, 2:06½, at 10 years of age, was the sire of Miss Perfection (3), 2:09½, (that won a heat in 1915 from Peter Scott), Josephine Watts (3), 2:09½, and Mahomet Watts, 2:08½.

If "Agricola" has a mare good enough to breed to his neighbor's horse, Todd Mac, he can get a colt that will bring a high price in any market in the world.—L. E. Clement.

FRENCH PERCHERONS RELEASED.

Editor, Rural World:—Have just received a cablegram from President Aveline of the Percheron Society of France, exact translation of which is as follows: "Exportation of 200 stallions foaled in 1912 or earlier, authorized."—Wayne Dinsmore, Secretary, Percheron Society of America, Union Stock Yards, Chicago.

The principal sources of disease germs in milk are the air, the udder and flanks of the cow, the milker and the utensils.

CATTLE FOR BEEF AND FOR MILK

FALL CALVING COWS BRING MORE PROFIT.

A mistake made by a great many farmers is to have their cows calve during the spring months. All authorities on dairying are agreed that for many reasons it is more profitable to have cows calve in fall. The principal advantages of fall calving are four in number and are stated below.

1. As a rule, prices for dairy products, especially butter, are much higher in winter than in summer. Hence, it is desirable to have the cow produce the greatest part of her milk, which she does in the months immediately after calving, during winter.

2. Cows calving in spring usually have plenty of good pasturage im-

properly by substituting muslin for window glass. This will allow a complete and continuous diffusion of the foul air out and the pure air into the barn. Clean white muslin will let in as much light even when frosted over as will glass. It will at the same time make an ideal ventilator.

THE COW AND HER PRODUCT.

The wise dairyman has his cows calve in fall.

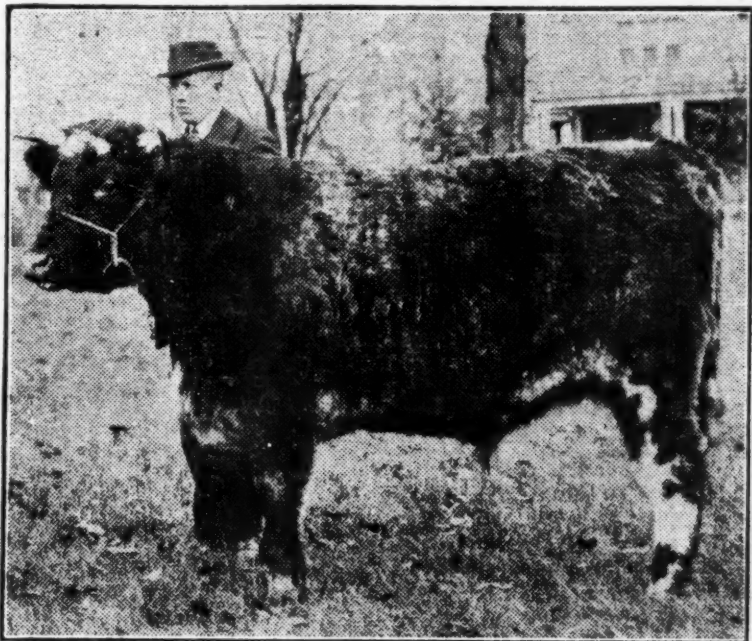
Don't run your dairy by guesswork. Test every cow you have.

On account of the succulence and palatability of silage, a little more can be fed than will take the place of hay.

A 2 per cent solution of creolin is a good, cheap disinfectant to use in dairy work. It should always be used after milking, however, and not before.

When a bull is stall-fed he should have a plentiful supply of nitrogenous roughage, such as good, clean clover or peavine hay.

The common ailment of cattle can for the most part be prevented by good feeding, housing, and treatment, and reasonable precaution against contagious disease.



This Missouri State Fair Champion Will Be Slaughtered to Furnish a Feast for the Farmers Who Attend Farmers' Week, January 3-7, 1916, at Columbia. The House in the Background is the Home of Dean F. B. Mumford.

diately and this lasts until about August. But during this period the cow's flow is naturally heavy anyway. About the time pastures dry up, a spring-calving cow's milk flow begins to fall off and by the time she is put on dry feed of sufficient quantity, her milk production has generally fallen off so much that it cannot be brought back to normal. On the other hand, when cows calve in the fall, their owners will see to it that they get plenty of dry feed to provide for the heavy milk production of winter. Then when the cows begin to fall off in the spring and need good succulent feed most, the pastures come along to keep up their milk flow.

3. It is important to be able to do most of the dairy work when other farm duties are light. Winter is the lightest of the season for farm work. When cows calve in fall, the bulk of the year's dairy work comes in winter.

4. When a man has his cows calving in fall, he will unquestionably have a greater inducement to grow silage corn and fill a silo for winter feed for his stock. In this way, he is led into the practice of using silage, the most economical winter feed for cattle.

MUSLIN WINDOWS.

While warm quarters and comfortable surroundings are desirable for wintering stock, care should be taken to provide for plenty of ventilation. Often precautions against the winter wind leads to a lack of air circulation which fosters disease germs. Ventilation, however, should not be accomplished by leaving a door or window open at any time, but may be done

CREAM OF THE DAIRY NEWS

CLEAN MILK IS SAFE MILK AT ALL SEASONS.

Many dairymen consider that it is not necessary to take the same precautions in milking and handling milk during freezing weather as when it is warmer.

It should be kept in mind that milk is a food—a very wholesome food when it is secured from healthy cows under sanitary conditions, but a dangerous food if it comes from tubercular cows and is so carelessly secured and handled as to permit the entrance of stable filth and dust.

Men who have made a careful study of tuberculosis in dairies state that, on the average, at least one in eight of our dairy cows harbors the germs of tuberculosis and that these organisms find their way into the manger and gutter. Dust from the feed or from the manure, or small particles of the latter, may convey these dangerous bacteria to the milk.

Much may be done to lessen this danger by using plenty of bedding, feeding moistened feeds and a thorough wiping of the udder and flank of the cow with a damp cloth. A covered pail is also of considerable assistance.

Stable dust can be settled by sprinkling the stable floor a short time before the cows are milked. Bacteria stick to wet surfaces, but as they are free to float in the air again as soon as the surfaces have become dry, the floor should be kept moist until after the period of milking.

If all of the dairy cows were subjected to the tuberculin test, the precautions mentioned above would not be so important for the tubercular cow could be identified and removed; yet there are other bacteria in the stable dust and manure which are injurious to the human system. Milk secured from cows free from tuberculosis, with clean moist flanks and udders, milked with clean hands into sterile covered pails in dust free stables and kept cold is a safe and wholesome food.

RIPENING OF CREAM.

By the ripening of cream is meant the changes it undergoes from the time of separation until it is added to the churn. Upon these changes depends very largely the quality of butter as regards texture and flavor. The temperature at which cream is held determines the firmness of texture, while the flavor is dependent upon the by-products from the bacterial growth.

The purpose of ripening cream is fundamentally that of giving the butter the desired flavor and aroma, but in addition it increases the ease and efficiency of churning. Cream is ripened in one of two ways:

First, it sours or ripens as a result of the action of bacteria which are normally present in milk and cream; or,

Second, it ripens as a result of action of certain kinds of bacteria which are added in what is termed a "starter."

SUGGESTIONS FOR THE DAIRY.

The small top milk pail is a necessity in the production of clean milk. A dairy barn should have good natural drainage and afford shelter from the cold winter winds. Dirty milk is more dangerous than dirty water because disease germs that would starve in water will multiply rapidly in milk.

When the dairy cow is fed just enough to maintain her body weight she cannot be expected to give much milk. About one-half of the nutrients in the average ration go to sustain the body. Always feed a full ration.

The milking stool is not an instrument for beating cows.

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PUBLIC SALE OF JACKS AND JENNETS

To be held at COLUMBIA, MO., FEB. 3, 1916. At this time 50 head will be sold, 30 jacks and 20 jennets, ranging in age from 1 to 5 years. Twenty-five of the jacks are old enough for service. Some of the best jacks sold this year will be in this sale, including our two great herd jacks. Several of our two-year-olds will weigh over 1,000 lbs. If you want something good attend this sale. Write for catalog to

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16 heifers and 2 bulls practically pure Holstein, but not registered, 4 to 6 weeks old, all beautifully marked and bred up for milk and butter production. Will sell one or all at \$20 each, and crate them for shipment anywhere.

EDGEWOOD FARM, Whitewater, Wis.

Free Samples—High Yielding Pedigreed Seed Corn. Pedigreed Nursery Co., Sullivan, Mo.

Big Sleeping Doll FREE

This fine sleeping doll is nearly two feet tall, and is all the rage. She has slippers, complete underwear, stockings, etc. Dress is very prettily made, half length, and trimmed with lace; also has a little chatelaine watch with fleur-de-lis pin. You can dress and undress this doll just like a real baby. Has curly hair, pearly teeth, rosy cheeks, beautiful eyes, and goes to sleep just as natural as life when you lay her down.

This doll free for selling only 20 of our magnificent art and religious pictures at 10 cents each. We trust you with pictures until sold, and give an extra surprise gift for promptness. Send no money—just your name.

PEOPLE'S SUPPLY CO., Dept. H. W., St. Louis, Mo.

SHEEP & SWINE FOR MOST MONEY

FARM MANAGEMENT LAMBS TOP MARKET AGAIN.

The old idea that a professor or a book writer might be interesting, but could not be practical is being discarded. Many men cannot put the things they know into practice, but Prof. D. H. Doane of the Missouri College of Agriculture seems to be able to show other farmers how to succeed with the system which he based on studies of the sheep management systems in use in Missouri, Kansas, Nebraska, Iowa, Illinois, Tennessee, Kentucky, and other states. He calls it the farm management system, and stockmen have learned to recognize as farm management lambs and ewes the animals which conform to the type which he has recommended. Most of the feeders who took up his system were inexperienced, but not one has lost money through it, although in some instances they bought at \$6.40 and sold at \$6.35. One of them made \$200 on a single deal of sheep, and now he has just topped the market with some others. A St. Louis daily paper tells the story correctly for him as follows:

J. P. Hendricks, an enterprising farmer of Boone county, Missouri, was here today with a load of lambs that averaged 76 pounds and sold to the killers at \$9.15 per cwt., the day's top with a wide margin to spare. There were 137 head in the shipment. These were a lot of "farm management" lambs and they made money for their owner.

"I handled these lambs under the supervision of Prof. D. H. Doane, state leader in county agent work in Missouri," said Hendricks. "I bought them in the fall, got them home on September 10. I started them on short pasture and gradually accustomed them to use of the corn field. The first day I turned them in the corn field for one hour and increased this from day to day till they were there all the time. With my corn I planted soy beans, drilling the latter in with the corn. The lambs did well from the start putting on good flesh and I noticed that none of them scoured. I believe the soy beans are far superior to cowpeas, but would suggest that an early variety of soy beans be used. The lambs weighed 62 pounds when they went in to the corn fields and averaged close to 77 pounds on the market today. They made a net gain per head of nearly 15 pounds. They cost me \$8 per cwt. as feeders or \$4.96 per head. They grossed \$7.04 per head here today. Including freight, commissions and all other expenses, I figure that my lambs netted me more than \$1 per head clear profit to say nothing of the value of the manure."

"This is certainly a nice way to handle lambs in order to get maximum profit with least expense and smallest outlay of labor. Professor Doane is doing excellent work in this respect and I am sorry that farmers throughout the state are not going into lamb handling more extensively."

Mr. Hendricks also says: "Much of the credit really belongs to M. L. Remer, a student who returned to complete his second year in the short course at the college of agriculture, November 1. Until that time he had entire charge of the lambs."

NATIONAL SWINE SHOW ASSURED.

The committee appointed at the recent meeting of the National Swine Growers' Association to arrange for a National Swine Show, believe it advisable to make announcement at this time, that a show of this kind is now assured for some time during the first half of October, 1916. The committee believes that nothing but interference by quarantine regulations will prevent

the holding of a swine show that will be in every sense of the word, national in character, and undoubtedly as great a show of hogs as has ever been gotten together.

A \$10,000 prize fund is assured. This is made certain by a guarantee of \$2,000 for each one of five breeds of hogs. The record associations are back of this prize fund. It is altogether likely that some of the other breeds will participate in the show on the basis of a smaller prize list, probably \$1,000 for each breed.

The exact location of the show will be determined in January and definite announcement made as soon as possible. The committee already has at least one proposition which is more favorable than it had been supposed could be secured. So this proposition is certain to be accepted, unless something more desirable is submitted later.

Recognizing that it is none too early for those who would expect to be exhibitors at a National Swine Show to begin making preparations, this advance announcement is made.

BEST SOWS FOR PRODUCTION OF MARKET HOGS.

"Select the prospective brood sows for next season," says W. J. Carmichael, of the University of Illinois. "Some day when you can take the time, get the gilts together, decide how many you will want for the breeding herd and sort them out, taking great care to get only those which have good quality, plenty of stretch, long, strong back, good feet that stand up well on the toes with the toes together and with as much uniformity as possible. In making these selections don't lose sight of the pigs from those sows which are regularly good producers, and on the other hand, do not forget to discard the pigs of sows or strains which have shown themselves to be unprofitable. Of course succeeding generations do not always perform in a manner identical, or even similar to the preceding, but as a general rule there is a tendency towards a resemblance of record performances."

"Another place where many make a mistake in the selection of breeding stock is in choosing those animals which possess the most size, regardless of quality or conformation. It is frequently the case that the larger ones are the most profitable, but year in and year out they are not as profitable in the production of market hogs as are the average-size sows. The average-size sows may not farrow quite as many pigs per litter as those above the average in weight, but they will save a larger per cent of pigs farrowed, and the offspring will almost invariably be more uniform. Take, for instance, in the herds where they are raising annually about 1,500 pigs, it is the general experience that the extreme sized sows are the most unprofitable and more expensive to handle on account of the greater amount of feed consumed and the extra labor and space required to care for them. The other extreme, that is, the small, midget female, is also to be avoided because she will likely produce very small litter and the pigs must be kept a long time before they are heavy enough to market to a good advantage."

HAVE HOGS HEALTHY—CONDI- TIONS MUST BE SANITARY.

Keep hogs thriving; strong healthy hogs resist cholera.

Quarantine every hog, dead from cholera; the law requires it.

Lice, worms, and insanitary conditions weaken hogs and invite cholera.

Disinfect hog yards occasionally with unslacked lime; it's good cholera insurance.

Serum and sanitation make the best preparation for the warfare against hog cholera.

Keep cholera hogs and carcasses away from the stream and insist that your neighbor do the same.

The straw shed for hogs is almost sure to be either damp or dusty. Either condition invites disease.

Keep gunny sacks saturated with crude oil where hogs can rub against them. Raise more hogs and fewer lice.

Kill lice with crude or fuel oil sprinkled on the hogs at feeding time, applied to rubbing posts or used as a two-inch layer on top of the water in a dipping tank.

Coughs and pneumonia from dusty beds may incidentally be prevented if louse-infested beds are oiled. Breathing dust may cause death from pneumonia and certainly renders hogs less resistant to cholera.

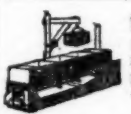
The Missouri Agricultural Experiment Station has carefully tested each of these remedies and so have thousands of good farmers. They have stood the test but are not substitutes for serum treatment for they resist but do not entirely prevent cholera. These thrift-producing measures would pay if cholera did not exist.

Sprinkle freshly slaked lime about one-sixteenth of an inch deep over the lots, sprinkling quarters once every month or two. At this rate, a barrel will kill the germs on about 1,280 square feet of lot space. Combat worms by feeding a mixture of four parts of charcoal, three parts of cop-

peras, three parts of common salt, three parts of Glauber's salt, three parts sal soda, one part sulphur. Mix in 100-pound lots and keep in a dry place where the hogs can help themselves. It is a good "conditioner" and has been thoroughly tested at the Missouri Agricultural Experiment Station and on many farms.

If the pigs are uneasy and squealing there is something wrong. Find out what it is.

Keep a trough or tank of clear water in every pig pen. If you keep a lookout you will be surprised to see how often the hogs will go to the trough for a few swallows of water. They will drink clear water as often as a man does and with as much relish, too.



CANNING FACTORIES FOR SALE
For Farms or Towns. 16 sizes.
\$85 to \$850. On Time; 1 cent on cash;
per cent of profit; or cash. Write for
Booklet. **THOS. M. BROWN,**
Springfield, Mo.

AGENTS! A NEW ONE

Sell the Liberty Safety Air Burning Lamp

We Want Men and Women to Start at \$30.00 a Week
Experience unnecessary—we'll teach you the business and
how to make more a week than most men make a month—assign
you exclusive territory and give you a big start. Moulder made \$3
clear profit first 10 hours. Fitter sold 24 in 3 days. Brandt
sold 24 in first week. Brewer sold 25 in one day.

300 Candle Power—50 Hours on One Gallon Coal Oil

This new Improved Safety Air-Burning Lamp is right—nothing like it
invented—nothing so simple. Price low—sells quick—Profit big—
possibilities unlimited—guaranteed. Every family buys one to six—
can't help it—saves steps, time, trouble and fuel—pays for itself in a little
while. This marvelous new invention—this wonderful new Lamp, burns with-
out odor—Burns Air—98 Per Cent of it—Only 2 Per Cent fuel—common coal
oil (kerosene). No chimney. Simple—easily cleaned. It's a business that
makes you independent—gives you a local prestige and plenty of ready money.
Write quick for FREE Sample Offer and exclusive territory rights. Send
letter or postal and do it at once.

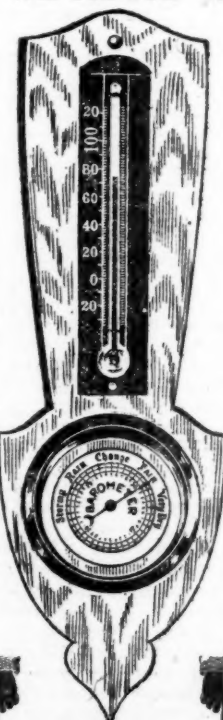
THE FOOTE MFG. CO., Box 1004, Dayton, Ohio



Will It Be Fair---Or Stormy---Tomorrow?

"The Weatherometer"

Will Tell You. It Forecasts The Weather Hours In Advance.



ALL of us are interested in knowing what changes of weather are likely to take place within the next twenty-four hours. There is hardly a day in the year when our plans for the morrow are not largely influenced by what we think the weather is going to be. But it is seldom we strike it right. Stop and think how many times the elements have interfered with your work, holiday pleasure, business or visiting trips, shopping tours, etc., causing you inconvenience, disappointment, discomfort, even loss of money perhaps, all of which might have been avoided had you been able to foretell the weather in advance—if you had had a Weatherometer at hand to tell you just what "tomorrow's weather" would be.

There have been many instruments designed to forecast the weather but most of them are more or less unsatisfactory. Here, however, is one that you can depend upon. Repeated tests have proved the Weatherometer to be one of the most accurate weather forecasters yet invented. It is in reality a reliable barometer and thermometer combined, mounted on a handsome metal base of an attractive and ornamental design, 4½ inches wide and 13½ inches in height.

An Accurate Barometer—A Reliable Thermometer!

The thermometer is of oxidized brass with a 5-inch scale which truthfully registers all degrees of temperature from 20 below to 120 above zero. The barometer is entirely different from the old-fashioned unreliable liquid barometer in a glass tube. It is enclosed in a round polished brass case and consists of a scientific mechanism so delicately adjusted that it is affected by all atmospheric disturbances denoting fair weather, rainy or stormy weather, generally unsettled weather, very dry weather, etc., and all of these changes are faithfully and accurately indicated hours in advance by a needle on the dial as shown in the illustration. Being constructed upon strictly scientific principles it never makes a mistake. The Weatherometer is in fact a private weather bureau in your own home. Hang in a fairly well protected place outside the house near window or door and it requires no further care, as there is nothing about it to deteriorate or get out of order.

As invaluable as the Weatherometer is to every home it is literally "worth its weight in gold" to those who largely live or make their living out-of-doors. Every farmer especially should have one of them because he of all men is perhaps the most dependent upon weather conditions the year round.

We guarantee every Weatherometer sent out to be scientifically and mechanically correct. Each one is carefully packed in a special box made for the purpose so that breakage is practically impossible. We will make you a present of a Weatherometer exactly as above described in return for a very small favor. Here is our

SPECIAL OFFER Send us \$1.10 to pay for a two-year new or renewal subscription to Colman's Rural World, and we will send you this Weatherometer free by parcel post. Address all remittances to Colman's Rural World, St. Louis, Mo.

**Know
Tomorrow's
Weather
TODAY**

THE HOME CIRCLE

AND THE KITCHEN

GOOD CHEER—PERSEVERE.

When plans seem to go reverse
And you sit regretting,
Then cheer up and bear in mind
Beauty's worth the getting.
Worry, friend, will make it worse,
Then no use in fretting.
Do like the hen upon her nest—
Just keep on, keep on setting.

St. Louis. ALBERT E. VASSAR.

REMINISCENCES OF EARLY DAYS IN SOUTHWEST MISSOURI.

To the Home Circle:—I have been so very busy that I have not had time to write. We had apples to pick, corn to gather, wheat to sow, rye to sow, potatoes to dig and wood to haul. We have 14 big loads of wood which will last one year. The loads were 36 inches high and 10 feet long. My neighbor sawed this wood in three hours and 20 minutes for \$2.50. We paid \$16.35 for the wood and hauled it four and a half miles. We can't afford to cut or saw wood by hand power while we can get it sawed so cheap. It was sawed by gasoline power. All wood saws are operated by gasoline power in this section. When we used steam power, the wood we burned in the engine amounted to almost as much as the cost of sawing.

Someone asked in a recent issue of the Rural World for others to write oftener and tell about our homes. I can tell a great deal about my home, for I am living at the farm home where I was born in the year 1856. I have lived on this farm all my life, except 17 years. In 1864 and 1865 we resided on a farm in Green county, seven miles southwest of Springfield, and I lived on an 80-acre farm 15 years, adjoining the one I am now living on. I bought that 80-acre farm in 1881; paid \$30 an acre. Little less than half of this 80 had a fine growth of timber on it. I pulled those trees with a two-man power and left no stumps or roots in the way of plowing. I was married December 20, 1891 and moved on that 80-acre farm January 1, 1892, and remained there until March 1907. That farm is now worth \$200 an acre.

All of my six children have been trained to work on the farm. I am glad that I can tell you that none of my children are drunkards, or tobacco users.

We are now living on a farm of 140 acres on the Frisco R. R. We grow corn, wheat, rye, oats, strawberries, apples and peaches, horses, mules, cattle, hogs, sheep, chickens and ducks. Have had goats, geese and turkeys, but have none now. I must not leave out the flowers for we have so many beautiful ones. Early last month I made my wife a flower bed 4x8 feet, and she set some flower roots that will make flowers in March. We are all great lovers of flowers. We are not rich. Our home is quite humble, just the kind I like.

I was raised in a log house and got my little bit of learning in a log school house, but I appreciate my childhood training more than all the other—that was the training that my dear mother and father gave me when I was sitting on their knees around the old-fashioned stone fire place. My father died in 1892 and mother died in 1895, both died in their 76th year. A true mother is one of the best teachers that there is. Many boys and girls cannot appreciate a good mother's blessings not until they have lost a mother. What is home without a mother? My mother could neither read, write nor spell; father could read fairly well, but he could not write, but they knew how to work and were honest. My mother planted cotton seed, and the cotton plants, picked the cotton and carded the cotton into rolls with a hand card, spun the rolls into thread, wove the thread into cloth, made the cloth into garments for summer wear, spun wool and made woolen garments for winter wear. I helped my mother spin wool to make my own clothes.—E. N. Hendrix, Missouri.

The Home Circle is a meeting place for friendly gatherings of the Rural World family. All of its members are invited to meet here in correspondence and good fellowship. Send lots of letters and get really acquainted.

The Kitchen is a factor in the Home Circle that no one can do without. Help to make it helpful, by sending for publication suggestions on how to make and do the things that are made and done in the kitchen. Tell others your ideas and experiences.

NOTES FROM THE OZARKS.

To the Home Circle: I want to chat about my flowers, and tell the sisters about the pleasure I have derived from them. They are company and entertainment for me. I love to watch them develop from a tiny plant to a stocky bush. And watch a slip show signs of growth! There's some inspiration about it!

The zinnia is an easy plant to cultivate. I start the seeds in a bed in the garden then transplant after they bloom enough to show their color, setting them a foot or more apart. That way you can get the color you like. They need shade for a few days and watering. Some of the flowers are almost fine as dahlias. They are nice for bouquets. Then grow three or four feet high and bloom till frost.

The chrysanthemum is the good-bye flower. The nice weather lets them bloom a good while. Frost does not harm them, but a freeze does. In front of my large window by the fence I had several varieties of white and a very small yellow also some light delicately shaded 'mums. In front of these were Salvia splendens which are red, and red carnations. The combination was very pleasing.

The salvias make a good house plant; it is in full bloom now inside. My window is full of nice blooming flowers.

Mrs. Cody, I thought perhaps the editor would permit some of us elderly people to write if our subject was not very useful or uplifting.

Mrs. Menaugh, I just guess your ma knew what was good when she said quince preserves were good. They are extra fine, and they make very good fruit canned and sweetened generously.

Wishing all a Happy New Year!—Aunt Ray, Missouri.

NOTES FROM ARKANSAS.

To the Home Circle:—A few lines to let you know what we did last summer in the mountains. We tried to raise plenty to eat of everything and we generally do that if we half try. We have enough dried and canned fruit to last two years. And everybody seems to have a good supply of almost everything.

Any person passing through this part of Arkansas and seeing the nice fat hogs on the range would be tempted to come here and buy a farm. We had fine autumn weather. I think autumn is the loveliest time of the year, when the leaves are so pretty. I never tire looking at them.

There have been many robins here and the little snow birds are here also. I also noticed a covey of quails the other day. They are getting scarce. We will soon begin to feed the birds. I like to watch them eat.

How many of farmers' wives have late chickens? I have four hens with young chickens; they are growing nicely. I lost nearly all of the early chickens on account of it raining so much. Hoping you all had a nice time Christmas!—Sarah L. Spears, Arkansas.

RAINY DAY AMUSEMENTS.

To the Home Circle:—Some empty gun shells, a pan of sand and an old charger will keep the small boys still for hours, loading shotgun shells for papa to kill rabbits with. The wee girlie enjoys a needle, thread and some pieces to sew quilts and make dresses for dolly. A pair of blunt scissors and catalogues with bright colored pictures, keep them quiet for

a while. Even the boys enjoy stringing beads. A box of blocks obtained from the carpenter building a house near by has never lost their charm.

When the children begin to tire or show signs of quarreling, it's "gather them all up kiddies, and we will have a game of bread and butter come to supper"—that puts them to rights again.—Mrs. D. B. Phillips, Tennessee.

FROM POLK COUNTY, MISSOURI.

To the Home Circle:—We have always condemned the autumn strawberry, as they are smaller than some other varieties, but a neighbor had four rows and sold several crates to some of the wealthy people at 15 cents a quart, so we want to plant out some of them next year and also set out some cherry trees, both of which we think will be most profitable.

Others should try growing the new Fordhook squash. They are delicious baked and do not have to be peeled as the skin is so thin.

Have you ever noticed that if you start beans cooking in hot water, the outer shells will close up and the bean will remain hard and never get tender? Always start beans cooking in cold water. Also in making hominy put the corn and the ashes in cold water at first.

I heard a woman say: "It is getting to be the fashion to keep a door open and allow the fresh air to come in." If that is the fashion the doctor will soon be out of employment. When I was a child we sat by a fireplace with the door open most of the time and we never had a doctor.—Nettie B. Richmond, Missouri.

CHANCE FOR BOYS TO HUNT TREES AND MAKE MONEY.

The most valuable land in the world is in the Sahara Desert. It is made valuable by the date trees that cover every spot where enough water can be had to make them grow. This great land value comes because man has there utilized the productive power of the tree, nature's greatest engine of production. It is really remarkable that we in the United States have used trees so little to do our work for us.

An orchard of black walnuts, or shagbark hickories, or native hazels, or Ohio Valley pecans, with trees as good as the best wild ones now growing would be very, very valuable. Why don't we have them? Merely because we haven't noticed and haven't thought. It is high time we caught up with the people of the desert.

We happen to have a million good Baldwin apple trees, and another million good navel orange trees, because somebody took pains to tell about the original good wild tree that started the million. By budding and grafting, that one Baldwin apple tree has become the parent of many millions. We now know how to propagate all the nut trees, and can turn one good shagbark or black walnut or pecan or hazel into millions. But where are the suitable parent trees from which to graft and bud?

To help bring promising nut trees to light, and thus start a new industry, the Northern Nut Growers' Association is offering cash prizes of from \$10 to \$50 for the best tree of black walnuts, butternuts, shagbark hickories, hazel nuts and northern pecans. Send a dozen nuts from the best nut tree of any kind that you know of to Dr. W. C. Deming, secretary of the Northern Nut Growers' Association, Georgetown, Connecticut, and ask for particulars of the prizes and rules of the contest.

RECIPE FOR SAUER KRAUT.

To the Home Circle:—I have a recipe for making sauer kraut that we think is much better than the old way of making it. We make it as late as January, if we have more cabbage than we want to use fresh.

We use a 12-gallon jar for our kraut. Cut cabbage on a slaw cutter, a tubful to commence with. Put about four inches of cut cabbage in the jar and

sprinkle over it four tablespoonfuls of barrel salt and three tablespoonfuls of white sugar, then repeat with the same amounts of cabbage, salt and sugar. Press down after each layer with the hands firmly, until the brine comes on top. The kraut will be more brittle and whiter than by stamping it down. Can use it in three weeks.—Mrs. C. F. Harman, Ohio.

SANDWICHES IN THE SCHOOL LUNCH—RECIPES.

Well-prepared sandwiches should form an important part of every school lunch. They are easily made and should be very wholesome and palatable. Variety is the spice of life here as elsewhere, and there should be at least two kinds of sandwiches in each lunch. The number and kind may be varied from day to day.

Cut the bread for sandwiches into thin slices of uniform thickness with a sharp knife, and spread the butter evenly over both slices of bread in order to keep it moist and prevent any fruit filling that may be used from making the sandwiches soggy or indigestible. Sandwiches made several hours before they are to be eaten should be wrapped in a moist cloth and kept in a cool place, or wrapped in wax paper, to prevent them from drying or absorbing odors.

In giving these directions for making sandwiches, Miss Bab Bell of the University of Missouri, College of Agriculture, says little about meat sandwiches because most people are familiar with the ordinary ham sandwiches, and in many cases such meat substitutes as peanut butter, eggs, or cheese should be used instead of the more expensive meats.

Sandwich Materials.

Bread and Butter—Cut the bread in thin slices. Spread the butter evenly on both slices and press together.

Lettuce—Make a bread and butter sandwich and place a leaf of crisp lettuce, washed and thoroughly dried, between the two slices. Put a teaspoonful of mayonnaise dressing on the lettuce leaf.

Nuts—Make a lettuce sandwich, spread one side with nuts, chopped fine, and mixed with good dressing.

Chicken—Chop cold, boiled chicken and moisten with mayonnaise dressing. Spread between bread. Add a lettuce leaf.

Eggs—Chop the white of hard boiled eggs very fine. Mix the yolks with mayonnaise dressing and season with pepper and salt. Add the whites and spread between bread. Lettuce may be used also.

Dates—Make a filling of one-half cup of stoned dates, one-half cup of sweet cream; spread between slices of buttered bread.

Pimento and Cheese—Make a filling of one-half cup of cream cheese and one-fourth cup chopped pimento, two tablespoons salad dressing, salt and pepper. Spread on butter evenly. Cottage cheese may be used or the pimento may be left out.

Peanut Butter—Peanuts ground and mixed with a salad dressing make an excellent filling. The commercial peanut butter may also be used. Spread evenly between buttered bread. A crisp lettuce leaf adds to the attractiveness of this sandwich.

FREEZING ICE IN PANS OUTDOORS.

Farmers as well as town folks need ice during the summer months and with a little work and at an expense of only from \$13 to \$20 they can have their own ice plant. The ice plant can be made of galvanized iron, consisting of a double tank with an inner compartment about 100 feet long, two feet wide and 12 inches deep. The top of the tank should be slightly wider than the bottom. The inner tank should be divided into six compartments by means of galvanized iron strips. The double tank should be placed near the outdoor pump where it can easily be filled. Being exposed on all sides, the water in it will freeze in from one to three hours. A bucketful of hot water poured into the space between the tanks will loosen the cakes of ice each weighing 200 pounds. Fourteen freezings will yield four tons of pure ice, enough to last the average family for a year. The cakes can be packed away in the icehouse as they are frozen.

The Bill of Fare in Fiction and Romance

Dear Home Circle:—Have you ever noticed the appetizing bill of fare a novelist prepares occasionally? See Dickens, for instance. What solid substantial viands he sets on the board; a saddle of mutton stuffed with oysters is one of his selections. Mr. Ainsworth tells of the pasties and boar's head menu of England in Tudor times. What I most notice, however, is how speedily a meal is prepared. A loaf of bread is mixed and baked, or it may be a dish of muffins, while the hero shakes hands with his uncle and says: "I'm glad to be at home."

Mrs. Stowe was a great hand at preparing meals on paper, and Marion Harland tempts one's appetite in her autobiography, where she tells of a supper on one snowy Christmas Eve. It is a warm, cozy delightful picture of a merry group gathered around a bountiful table, lighted with great glowing candles, and decorated with emblems of the season.

But there is one article of diet, I did not wish to share—they sprinkled sugar on snow, poured cream over it and sent it to join the solids. What think you of such a dessert?

The quickest cooked meal read of recently occurs in one of Miss Ellen Glasgow's novels. Old Mr. Fletcher declines to buy some chickens offered him at the front door; the vender goes to the kitchen and sells the fowl; then as the old gentleman immediately is called in to supper, he finds the poultry awaiting him, deliciously fried, and of course he partakes, not recognizing the chickens, he refused to purchase about three minutes earlier. How the chickens were killed, cooled, plucked, singed and drawn, let alone, fried in so brief a space of time is a problem difficult of solution.

Miss Glasgow has a Christmas Eve supper scene, too, in another of her charming books. It does one good to read it, and it is drawn from memory, because young as she is, she has seen beautiful suppers in a southern mansion.

In "Kennedy Square" which is a delightful story of life in Baltimore "be-fah de wah," the author prepares a dinner; there are no ladies there, and the male beings sit down to "the soup as an advance guard of gumbo or clams—or both; a sheep's head with potatoes that would melt in your mouth; then soft shell crabs with cucumbers; then woodcock and green peas and green corn; then an olio of pine apple and Cheshire cheese, and marvellous crackers and coffee, and cantalopes and peaches—and then nuts."

The people surely had epicurean diet in those old days—fried chicken and hams soaked in Madeira wine were common articles. How bitter must have been the recollection of the Lucullus banquets when "war winged its wide desolation" and one had to be content with dried apples and dried peas. No more bountiful repasts at hog killing time, no more toothsome oyster roasts, no terrapin or turkey!

The waffle appears largely in the Southern romance bill of fare. It is on the table at breakfast and graces the board at supper.

Partridge, too, is on the mahogany for the morning meal, and batter bread.

If it is true that rich food produces rich manners, that we are what we eat, it is not to be wondered at that the people of the South had such exquisite ways, considering the superb diet they fared upon! The soil, the

air and the water supplied the richest and rarest for their daily sustenance—the vine and the tree produced wine, fruit and nuts to further increase the bounty of the repast. Graceful meat made graceful men!

And that reminds me of a friend of mine. Her manners were so polished, her charm so intense, although the education was limited, and her method of every day life so accurate and well rounded, together with the training of her little girl, that I spoke one day very favorably of her birth and rearing, and the rich food of which she had eaten.

"You are mistaken, friend," she said coloring slightly. "I never lived for one day according to your picture of my girlhood. I was born and raised in a log cabin with a dirt floor. I never met grand people or heard grand talk. I was brought up following the plow on a few bare acres and my best diet was hog and hominy!" So much for assimilation.—Mrs. M. H. Menaugh, St. Louis.

FONDANT—BASIS FOR MANY HOME-MADE CANDIES.

Directions for making fondant: Two cups sugar, one cup water and one-eighth teaspoonful cream of tartar.

Place the mixture on the back of the range and heat gradually to the boiling point, then boil without stirring until it reaches "soft ball" stage. In the meantime keep the sides of pan free of sugar crystals by occasionally wiping with a damp cloth, which for convenience may be wound around the tines of a fork.

As soon as syrup will form a soft ball in cold water, remove from heat and pour onto slightly oiled plates. When the mixture cools beat with a wooden spatula until it lumps, then knead with the hands until smooth and creamy. It should then be covered with paraffin paper to exclude the air, and allowed to stand for at least 24 hours before using.

Some uses of Fondant.

Mocha Candy—Add a small amount of flavoring to fondant, and shape in small balls. Roll these at once in almonds which have been blanched, browned and chopped.

Cocoanut Balls—Prepare balls as for mocha candy, and roll in shredded cocoanut.—Evelyn G. Halliday, Colorado.

HONEY CANDIES.

Chocolate Caramels—One pint of sugar, one pint extracted honey, (or sorghum), quarter pound grated chocolate, half cup sweet cream. Try often, while it is boiling, by dropping a small portion in cold water. When it will form a soft ball. Pour about one-quarter inch thick on greased tins.

Walnut Creams—Boil to the hard snap stage one cup grated chocolate one cup brown sugar, one cup extracted honey (or sorghum) half cup sweet cream. When it hardens on being dropped in water, stir in butter the size of an egg. Just before removing from fire add two cups of finely chopped walnuts, stir thoroughly and pour on buttered plates to cool, cutting it into squares. Other kinds of nuts may be substituted for walnuts.

Butterscotch—One cup of butter, two cups of sugar, two cups of extracted honey (or sorghum), one heaping teaspoon cinnamon. Boil ten minutes, pour into a buttered pan and when cold cut into squares.

Cracker Jack—One cup brown sugar, one cup extracted honey (or sorghum). Boil until it hardens when dropped into cold water. Remove from stove and stir in half teaspoon soda. Stir in all the popcorn it will take, spread on greased tins and mark in squares.—Missouri College of Agriculture.

HOUSEHOLD HINTS.

When soda, soap or ammonia has taken color out of goods add vinegar to the rinsing water to bring it back. If acid has taken out the color use ammonia.

The oven should be quite hot when a cake is put in, for the mixture to rise well. Large cakes may be removed to a cooler part after the first hour, to thoroughly cook through. When a gas oven is used the gas should be turned down to about three-

quarters of the full heat as soon as the cakes are in. To prevent scorching underneath stand the cake tin in another containing water, or place sand on the oven shelf for the cake to rest upon.

If you wish to stick a paper and

have no mucilage or glue, you can make a "sticker" easily by paring a potato and rubbing it on the paper or whatever you wish to glue.

Toughness of angel cake is often due to the fact that the eggs are not beaten properly. They should be beaten so stiff that they will "stand alone."

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Send for 1916 announcement showing the Autos in various makes and models including Roadsters, Touring Cars, Trucks and "Jetney" Buses, at prices representing a fraction of their original cost. All sold on Easy Payment Terms. \$25.00 down will secure any car for future delivery. Any one may also be purchased at from five to eight dollars per week. We ship everywhere by express. These Autos Guaranteed for One Year. Prices from \$275.00 to \$785.00.

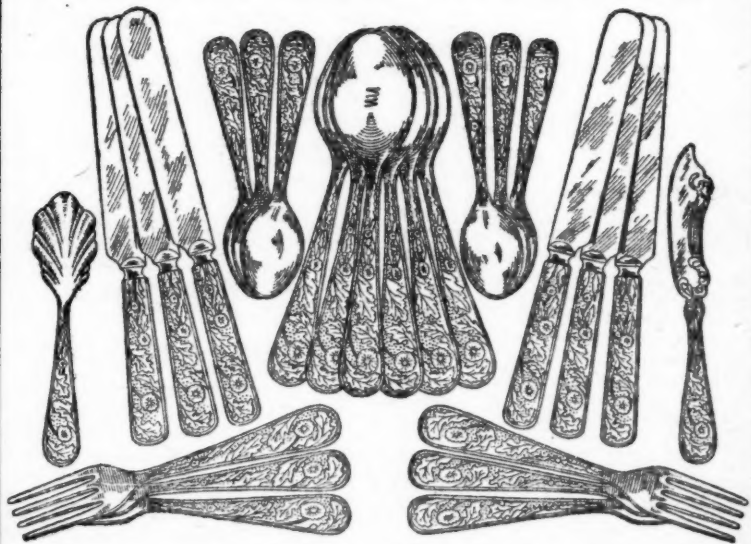
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FREE This Gold Plated Pendant (set with two sparkling simulated Diamonds) and regular Length Chain and this lovely Gold Plated Elite Bracelet (opens to fit wrist) and these 4 guaranteed Gold Plated Rings absolutely free to anyone who sends only 12 pieces of jewelry at 10c each and sends us the \$1.20. We trust you and take back all not sold. Address **M. A. DALE MFG. CO., Providence, R. I.**

FREE SILVERWARE

We have just received a fresh shipment of these beautiful 26-piece Electric Silver Sets from the factory. They won't last long. Send for your set today. We refund your money if you are not satisfied.

26-Piece Electric Silver Set



We Want You to Have a Set of This Silverware

We have in the past made many fine premium offers of silverware to readers of Colman's Rural World, but this is the first time we have ever been able to offer a complete electric silver set on such a liberal offer. And please don't think because we are giving away this splendid set on such liberal terms that it is the ordinary cheap silverware which is plated on a brass base and consequently changes color and has that "brassy" look just as soon as the plating wears off. This set which we offer you here is plated on a white metal base, therefore each and every piece is the same color all the way through and will wear for years. As shown in the above illustration there are 26 pieces in this set—6 Knives, 6 Forks, 6 Teaspoons, 6 Tablespoons, Sugar Shell and Butter Knife. Each piece is full regulation size for family use, the handles are handsomely embossed and decorated with the beautiful Daisy design which is now so popular and the blades of the knives and bowls of the teaspoons and tablespoons are perfectly plain and bright polished.

It is only because we buy this set in large quantities direct from the factory that we are able to secure it at a price that enables us to make the remarkable offer below. It is by far the greatest value we have ever offered. We will send this beautiful 26-Piece Electric Silver Set exactly as illustrated and described to any address upon the terms of the following special offer.

We have sent hundreds of these 26-Piece Electric Silver Sets to our readers, and in every case the subscriber has been delighted beyond measure. We are so sure that this 26-Piece Electric Silver Set will please and satisfy you that we make this offer,—and if you are dissatisfied after you get the 26-Piece Electric Silver Set, we will refund your money, or send you another set. You know we couldn't make such an offer unless this 26-Piece is exactly as we represent it.

How To Get This 26-Piece Silver Set Free

Send us a three years' new or renewal subscription to Colman's Rural World at our special price of \$1.00 and 25 cents extra to help pay postage and packing charges on the 26-piece Electric Silver Set—total \$1.25, and the complete 26-Piece Silver Set will be sent you by return mail—all charges paid. If you cannot get a new subscription to Colman's Rural World just send us \$1.25 and we will add a three years' subscription to your own subscription to Colman's Rural World. This offer may not appear again. Remember, for \$1.25 you get Colman's Rural World one year, and in addition we send you the 26-Piece Electric Silver Set—all charges prepaid. Sign the coupon below today before this offer is withdrawn.

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Colman's Rural World, St. Louis, Mo.

Enclosed find \$1.25 to pay for a three years' subscription to Colman's Rural World. It is understood that you are to send me the 26-Piece Electric Silver Set—all charges to be prepaid. If I find the 26-Piece Electric Silver Set is not better than you claim, I will return it to you, and you are to send me back my money.

Name

P. O. State..... R. F. D.....



Vanity Case FREE

Made of rich German silver, with fancy flower border. Has good mirror and powder puff compartment, places for quarters, dimes and nickels, also strong catch that will hold cards and bills, 18-inch chain. Given free to anyone for selling 30 large art and religious pictures at 10c each. We trust you with pictures until sold and give you 40 beautiful postcards as an extra gift for promptness. Send your name today. People's Supply Co., Dept. 2, 716 Lume Ave., St. Louis

THE MERRY GAME CLUB FOR OUR BOYS & GIRLS

Conducted by the President—Esslin Dale Nichols, Sweet Water, Ill.

Dear Children:—Our first prize game was sent in by Malinda Spooner of Climax, whose game is called, **Ships Arrived.**

Any number of children may take part in this game. To begin, the players secure a ball (but if a ball is not available a handkerchief may be knotted up and used instead) and the players sit in a circle far enough apart to allow the ball to be tossed from one to another. A letter of the alphabet is chosen and one of the players tosses the ball to another player saying: "Ships arrived." The other player asks: "What cargo does it carry?" and the first player must immediately name a noun beginning with the letter chosen. For instance, if the letter chosen is A the first player might say: "Apples, or Angora goats or aluminum axes, etc.," in fact, any noun beginning with A. But no player may have the same cargo. Of course, the ball is tossed back and forth until the words beginning with that letter are exhausted or until players decide to choose another letter. And of course players must pay a forfeit if they make a mistake in any way.

Malinda—I think this game would prove very interesting and I will send you a prize for it soon. Our second prize game was sent in by Ila M. Yoders of Cambridge, Ohio, whose game is called,

Going to Supper.

Any number of players can play this game. To begin, players all choose partners, form a circle and face outward. Two players are outside the circle and one must chase the other. When the one that is being chased grows tired of running he or she stops in front of one of the players in the circle and that player must immediately start to chasing the other player who runs until tired and then stops before another player in the circle who must in turn take up the chase, and so on until players are tired.

Ila—This is a game with plenty of exercise in it and I am sure our little members will get red cheeks playing. I am glad that you like our club well and hope you will always like I will send you a prize soon.

Our third prize game was sent in by Frances Tutwiler, Culpepper, Va., whose game is called,

Sheepie.

A circle is marked on the ground to represent a sheep pen and one of

the players must be a sheep herder. To begin the game all the players except the sheep herder get inside the circle and the sheep herder walks away calling the sheep. The sheep must follow, but when the herder turns the sheep must all run back to the circle, trying to reach it before the herder catches them. Should the herder catch one of the sheep the one caught must be a herder, too, and help catch the sheep. The game may be continued until players are tired.

Frances—I will send you a prize for this game soon. I am glad you enjoy the club so well and I was glad to print your game.

Our next prize game was sent in by Augusta Vakiener, Livingston Manor, N. Y.; whose game is called,

Kick the Wicked on Bases.

Any number of players may take part in this game. A number of bases are marked off on the ground quite a distance from each other. On the first base a stick is placed. To begin the game the players all stand in a row one right behind the other. The head one starts and tries to kick the stick from the first base. If he or she succeeds in doing this the rest of the bases may be run and the players return home. But if player fails to kick stick from first base he must go to foot of line and next player tries.

Augusta—I will send you a prize for this game soon. I am glad you enjoy our Merry Game Club games.

Mattie Kail, Jaqua, Kan.—I hope you received the prize I sent you. I sent you two because you wrote that you did not receive the first one.

Jennie Kail, Jaqua, Kan.—We do not print stories, dear, because we haven't room, but I thank you very much for a story anyway, for it was very nice.

Elvira Johnson, Patterson, N. Y.—I am sure you have read your game in Colman's Rural World by this time and have received prize for same. If you haven't tell me about it and I will correct the mistake if possible.

Winnie Belle Jones, Smithville, Ga.—I sent you a prize the other day and it was returned. But I think I know the reason. You did not put your full address on your last letter. You live on a rural route, do you not? and I think your letters are to be sent in care of your grandpa. But you see, dearie, I receive so many letters that I cannot remember every little girl's address, unless she writes it on every letter. So you just send it right away and I will send you a prize.

Good Advice.

Mr. Jephtha Wade, a well-known Cleveland man, has a winter home at Thomasville, Georgia. One of his sons is an amateur balloonist, and occasionally makes an ascent from Thomasville. If the family fail to hear promptly from him, they set forth in a motor car and search until they find him.

One day, when the roads were slippery with mud, the automobile skidded and slid part way down a bank. It brought up without damage against a large tree. Mr. Wade could not get it back on the road, and appealed for help to a farmer plowing in the field below. The farmer hitched his team to the front axle, and soon pulled the car out of trouble.

Mr. Wade looked back, and said, "That tree saved us from a bad accident; if it had not been there, we should have turned over and been badly hurt."

"Yes, suh," drawled the farmer, "that cert'nly is a useful tree! This mornin' a young feller in a balloon got stuck in it, and I had to h'ist him out."

"Why, that was our son!" exclaimed both Mr. and Mrs. Wade excitedly. The farmer looked at them for a moment with a puzzled expression; then his face lighted up with a smile, and he said:

"I reckon you folks would find life easier if you was to stay home more." —The Youth's Companion.

Making Him Go.

Pat was driving along the street and his old horse fell down and did not try to get up.

"Git up, git up from there, ye lazy critter," said Pat. "Git up, I tell ye, or I'll drive right over ye!"

THE RURAL WORLD PATTERN SERVICE



1307. Ladies' Corset Cover and Petticoat.

—Cut in three sizes: Small, medium and large. It requires 2 1/2 yards of 36-inch material for a medium size without the ruffle which will require 3 1/2 yards of embroidery.

1205. Girls' Over Blouse Dress With Gimpes.—Cut in four sizes: 4, 6, 8 and 10 years. It requires 1 1/2 yards of 27-inch material for the gimpes, and 3 yards for the dress for a 6-year size.

1521. Boys' Suit.—Cut in four sizes: 2, 4, 5 and 6 years. It requires 2 1/2 yards of 36-inch material for a 4-year size.

1319. Ladies' House Dress With or Without Yoke.—Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 5 1/2 yards of 44-inch material for a 36-inch size. The skirt measures 3 yards at the lower edge.

1450. Ladies' Five-Gore Skirt.—Cut in six sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It requires 3 1/2 yards of 44-inch material for a 24-inch size. The skirt measures 2 yards at the lower edge.

1510. Ladies' Apron.—Cut in three sizes: Small, medium and large. It requires 4 1/2 yards of 36-inch material for a medium size.

1522. Ladies' House Dress.—Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6 1/2 yards of 44-inch material for a 36-inch size. The skirt measures about 3 yards at its lower edge.

1312. Girls' One-Piece Dress.—Cut in four sizes: 4, 6, 8 and 10 years. It requires 3 1/2 yards of 36-inch material for an 8-year size.

1531. Dress for Misses and Small Women, With or Without Bolero.—Cut in three sizes: 16, 18 and 20 years. It requires 7 1/2 yards of 27-inch material for an 18-year size, with

1 yard for bolero. The skirt measures 2 2-3 yards at the lower edge.

1523. Girls' Dress.—Cut in four sizes: 6, 8, 10 and 12 years. It requires 2 1/2 yards of 44-inch material for an 8-year size.

1500. Junior Dress.—Cut in three sizes: 12, 14 and 16 years. It requires 5 1/2 yards of 36-inch material for a 14-year size.

1530-1516. Ladies' Costume.—Waist No. 1530 is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt No. 1516 is cut in six sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It requires 6 1/2 yards for skirt and over blouse of 44-inch material, with 2 1/2 yards for the underwaist of 27-inch material, for a medium size. Two separate patterns, 10c for each pattern.

In ordering patterns for waists, give bust measure; for skirts, waist measure; for children, age; for aprons say, large, small or medium.

These patterns will be sent for 10 cents each (silver or stamps). Send 10 cents for each additional pattern.

Fill out this coupon and send it to COLMAN'S RURAL WORLD, 718 Lucas Ave., St. Louis, Mo.?

Pattern No. Size Years

Bustin. Waistin.

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OUR SHORT STORY

Willie

By Vaughan Kester.

(Copyright by the Bobbs-Merrill Company.)

"THEY say The Pines is a great place to feed. I thought you'd be tickled to death with the assignment!" said Chisholm.

Bentley Ames' glance came back from the dome of the capitol, seen now through the closing mists of a rainy day and the falling twilight, to rest on his chief's face with a lurking suspicion of disfavor.

"I supposed you'd let me cover the convention," he said. "What's Carveth going down to Little Mountain for?—If he wants the nomination why doesn't he get busy?"

"He's made his canvass. You see, Ames, he runs a factory in one of the western counties,—makes shirts,—the business office gets a thousand a year out of him and the News has got to treat him right." And the following morning, Ames, the expression of whose face told of the spirit of resignation that possessed him, boarded the train for Little Mountain.

He expected to reach his destination by 10 o'clock, but there was a freight wreck on the road. As a result he spent five hours at a sad little way station, and when the line resumed its functions as a common carrier, he took the afternoon train that had just pulled in. He first sought the parlor-car, which he found occupied by three ladies; then in rather low spirits, his mind divided between thoughts of the luncheon he had not had and the dinner he would order at The Pines, he wandered on into the smoker. Near the door were four men playing cards. There next fell under his scrutiny a young fellow of five or six and twenty, who was reading a shabby volume of Emerson. Three seats farther on was the only other passenger in the car, a solidly built man of 60 with a pleasant ruddy face; he was dressed in black broadcloth and wore a high silk hat, and as Ames dropped into the seat opposite him he gave the News man a half smile of friendly recognition. There was something so genial and winning in his very air that Ames smiled in return.

"Slightly, ain't it?" and the silk hat dipped in the direction of the autumn landscape, where the brown fields yielded at intervals to gorgeous reds and russets set in a murky haze. Ames admitted the beauty, and the stranger took the cigar from between his strong even teeth. "Fond of nature?" he inquired.

In a general way Mr. Ames was, but he was not enthusiastic about it; indeed, he was so profoundly sophisticated that sensation of any sort reached him in a very diluted form. The elder man scanned the younger; then he drew from the region of his hip a flat leather pocketbook. It yielded up a square of pasteboard which he passed across the aisle to Ames, who read: "Jeremiah Carveth. Originator Plymouth Rock Dollar Shirt. Made on Honor."

"By Jove!" cried Ames. "You're just the man I want to see, Mr. Carveth. I'm from the News."

"Are you now?" Mr. Carveth was frankly pleased. "What's your name?"

"Ames—Bentley Ames."

"Excuse me—" and Mr. Carveth turned in his seat. "Willie, step here!" he called, and the reader of Emerson put aside his book. "Mr. Ames, I want you should know my secretary, W. C. B. McPherson, William Cullen Bryant McPherson," said Mr. Carveth, when the secretary stood at his elbow. "He's a newspaper boy, too—does the locals on the Marysville Clarion. Mr. Ames, of the Capital City News, Willie."

W. C. B. McPherson gave Ames an embarrassed smile.

"Not a newspaper man in the sense that Mr. Ames is." It was evident he stood in awe of this more metropolitan member of the craft.

"I don't know about that," said Mr. Carveth. "I've always considered the Clarion a mighty clean sheet."

Ames smiled enigmatically. He was thinking of Mr. Carveth's rival, General Pogue. "Slippery Dick, who lived with his ear next the ground," and of James Cartwright Smith, who was back of the general. Carveth resumed the conversation.

Ames had not been to Marysville; he admitted, however, that he had heard of the place.

The landscape beyond the car windows had changed its characteristic aspect. The fields had grown smaller, the goldenrod and immortelles waved over heaps of stones in the fence-rows, while the russets and reds and browns had given place to the somber green of pine and hemlock. And now the train drew up at a tiny ornate station. The three men climbed into the coach that was waiting for them and were soon toiling up a winding road, from which they presently emerged upon the single street of a sleepy village. Beyond the village and crowning the mountain's summit they could distinguish the long stone and timber facade of The Pines in the shadow of the sinking sun.

Ames dined with the candidate and his secretary; afterward he interviewed Mr. Carveth. His story off his hands, he was lounging about the office with only the night clerk for company, when suddenly McPherson appeared; he was in his shirt-sleeves, while his feet were thrust into worsted bed-slippers; in his hand he carried a pitcher. It was evident he did not see the two men in the corner by the news-stand, for after glancing about to get his bearings he disappeared down the corridor leading to the dining-room. A moment later they heard him rattle a locked door, then again the patter of his slippers sounded on the tessellated pavement, and he reappeared in the lobby. Ames heard him say "Dang git!" but rather in disappointment than in anger; and then the clerk emitted a shrill cackle of mirth, and McPherson, being thus made aware of the presence of the two men, faced them.

"Excuse me," he said. "But will you kindly tell me where I'll find the pump?"

Gray shadows invaded the darkness of the pines that clothed the slopes of Little Mountain, and through the open, eastward looking window of his room the morning sun shone in upon the News man. Perhaps he missed the clang of the trolley's gong, the early milk wagon's clatter on the paved street; perhaps it was the silence, scarce disturbed by the song of birds and the murmur of the wind in the pines, that roused him; but Bentley Ames emerged from his slumber and without changing his position, looked from his window into the red eye of the sun. He dressed and slipping out into the hall, tapped on McPherson's door.

"Come in," called the secretary, and Ames entered the room. McPherson was seated at his table, writing. "Oh, Mr. Ames—" he said. He seemed both pleased and embarrassed.

"Don't get up," and Ames, establishing himself on the edge of McPherson's bed, began to roll a cigarette. "Suppose you tell me how Mr. Carveth broke into politics," he suggested.

McPherson's face lighted instantly with enthusiasm.

"There's a wonderful man, Mr. Ames; a splendid type of the American business man! You should go through his factory; you should see the hundreds of busy operators. You would understand then what Mr. Carveth means to Marysville. Marysville," added the secretary, "is pledged to Mr. Carveth."

"I dare say." But Ames was not impressed by the loyalty of Marysville.

"You don't think much of his chances?" ventured McPherson.

"What I think of them wouldn't be fit to print," said Ames candidly. "Dick Pogue's rather a hot proposition for your man to stack up against, and back of Pogue is J. C. Smith." Ames slipped off the edge of the bed and took a turn about the room.

"You must admit, Mr. Ames, that no-

body has any confidence in either General Pogue or Mr. Smith," said McPherson.

"They can get along without it," said Ames with a calm cynicism.

"I shouldn't like to think that any public man could go far without the trust of his fellow citizens," observed McPherson.

"With those ideas you should keep clear of politics. You and Mr. Carveth may as well retire to the classic regions of Susansville."

"Marysville," corrected McPherson mildly.

"Marysville, then," said Ames. He paused by the corner of McPherson's desk. "Well, the occasion will be interesting as a souvenir of public life, eh, McPherson?" and he smiled down pityingly on the top of the secretary's slightly bald head, for McPherson was looking into the pictured face of a young girl whose photograph, framed in red plush, decorated his desk. Ames extended his hand and possessed himself of the photograph, which he proceeded to examine. "Your sister?" he asked, after a moment's silence.

"Miss Carveth," said W. C. B. McPherson, but his voice had lost much of its agreeable quality.

"I beg your pardon," said Ames, flushing as he hastily returned the photograph to its place on the desk. McPherson quitted his chair.

"I think we had better go downstairs," he observed stiffly.

They found Carveth waiting for them in the office.

"I been lookin' over the paper," he told Ames, as they seated themselves at the breakfast table. He turned to his secretary. "I can't see that we occupy so darn much space, Willie. The world seems unaware of the fact that Jeremiah Carveth and W. C. B. McPherson are willing to act as a kind providence in shaping the destiny of a free-born people. I'm getting a sickenin' consciousness that there's tall timber growing for me." He laughed in McPherson's face, which had gone from white to red. "Cheer up, Willie, cheer up. It's good to be alive, and the rest is dividends. You mayn't land me in office, but what's the odds? Crisp and bright, Willie, crisp and bright!" he urged with kindly concern.

But the thought of defeat was a bitter thing to McPherson, and presently he excused himself and quitted the table.

(Concluded Next Issue.)

CHILDREN'S EARS OFTEN NEGLECTED.

"Of all the organs of special sense, the ears are the ones most neglected, even after their function has become notably impaired," said Dr. Guy L. Noyes, acting dean of the School of Medicine of the University of Missouri, when asked about the troubles of hearing. Ear diseases are responsible for many of the absences from school of young children.

"Repeated recurring attacks of ear trouble with great pain and discharge are looked upon by many parents as unavoidable misfortunes to be dreaded, but not to be considered as serious, even so far as the function of hearing is concerned," says Doctor Noyes. "The condition of chronic discharging ears is the cause of 40 per cent of all cases of absences of the brain."

"It is well to remember that a 'running ear,' acquired possibly by neglect during childhood, will prevent its possessor from obtaining first class life insurance in adult life. Every single attack of earache leaves its mark upon the ear tissues and reduces in greater or less degree the power of hearing. Earache should be looked upon as one of the symptoms of a very serious ear disease. A running ear should always be treated by an ear specialist. Practically all the ear troubles noted in early school life may be controlled by prompt attention at the hands of an aurist. When deafness is so marked as to be detected easily by the unskilled observer, the opportunity to do the greatest good by treatment has gone. Repeated examinations, two or three in each school year, are necessary if the greatest good is to be achieved."

Doctor Noyes says that faulty habits of cleansing the ear cannot may lead to diseases of the ear. "A moist cloth

applied on the finger is the only object that one should put in his ear for the purpose of cleansing it," he says. "The custom of using ear spoons, hair pins, pens and other metallic objects in efforts to dislodge wax from the ear is a very dangerous one and has led to very serious consequences. If the ears need cleaning further than can be accomplished by the means indicated above, a doctor should advise it or carry it out himself. A considerable quantity of loose wax is normally found in the ear canal and does no harm there."

Doctor Noyes gives these warnings concerning children known to have chronic discharging ears:

They should not be allowed to dive while bathing.

They should not blow their nose to the point of making their ears "pop."

They should be taught to blow the nose in a loosely held handkerchief without pressing one side of the nose closed.

HOME-MADE SALTED ALMONDS.

Shell one and one-half pounds of almonds, blanch by pouring boiling water over them; let them stand for a minute; throw into cold water and skin. For one and one-half cupsful and one tablespoonful melted butter; stir well and let stand in a bowl for an hour; sprinkle with one tablespoonful of salt. Put nuts into a baking pan and bake in a moderate oven until they turn delicate brown, stirring occasionally. Hickory nuts or walnuts may be substituted for almonds if desired.

Apples cut in irregular block half more quickly in a pie than thin slices. When piled in a pie there is more chance for the heated air to circulate through the fruit, than when it is packed in thin slices.

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FITS YOUR OLD LAMP.

100 Candle Power Incandescent pure white light from (kerosene) oil. Burns either gas or electricity. **COSTS ONLY 1 CENT FOR 6 HOURS.**

We want one person in each locality whom we can refer new customers. Take advantage of our Special Offer to secure a Beacon Burner FREE. Write today. AGENTS WANTED.

HOME SUPPLY CO., 77 Home Bldg., Kansas City, Mo.

A Farm for a Criticism

Essilyn Dale Nichols, author of *Hap Hollow Farm*, *The House of Achievement*, *Country Primeval*, and other stories, will give, among other prizes, a fine farm for the best criticism of her *Big New Farm Serial* "The Robinsons of Dakota," which will be published in the *Farm and Real Estate Journal of Iowa*.

Everybody has an equal chance to win the farm, as well as the other valuable prizes.

Your Criticism Counts!

Send 25c for a year's subscription to the *Journal* and read "The Robinsons of Dakota," or if you want FULL particulars before subscribing send a red stamp to

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Dept. 2, HENRY L. FRIKING, Spencer, Ind.

POULTRY RAISING FOR FUN & PROFIT

WHITEWASH BANISHES MITES.

If you are going to be a successful poultryman, young man, you must get after the mites. They sap all the life out of the hens and cut down the egg supply enormously. They kill off large numbers of the most promising chicks. They are the worst enemies with which your flock has to contend. But you can get rid of them if you will. Have a thorough housecleaning some fine day. Clean up the dirty floor. Take out the roosts and scrape them, and clean out the dirty nests. If they are too badly infested, burn them up and make some new ones. Brush down the cobwebs from the corners. Then take a spray pump and spray the whole inside of the poultry house, getting into all the cracks and corners with a mixture of one part crude carbolic acid to 10 of kerosene. This kills any of the mites which may have fled to the cracks and crevices for safety. After this is dry, put on the whitewash. It may be put on with the same spray pump, but it sticks better and lasts longer if it is put on with a brush. Lice and mites can't stand whitewash.

After the whitewash has thoroughly dried, refit the house with clean roosts and nests, and put some clean straw on the floor. If you wish, you can dust the hens off with lice powder before admitting them to the house. Repeat dusting again in about a week, or better, apply the blue ointment. It is a very good time to do the job. If you will do this, you will find that the lice have departed for some other henhouse whose owner is not so good a poultryman as you.

Prevention should be the chief health measure in the chicken yard.

TIPS IN POULTRY FEEDING.

There is no economy in feeding fowls one kind of grain for that compels them to eat more than they ought in order to get a sufficient quantity of food elements. A large part of the egg is water, a fact which shows the necessity of providing layers with an ample supply of pure clean water in fountains or dished which are frequently disinfected. A sluggish hen is never a good layer. The flock should be made to exercise by scratching for whole and cracked grains in a deep litter of clean material and jumping for green food, such as a cabbage or a mangel.

NOTES FROM AN OHIO FARM.

Editor, Rural World:—My old friend, "Agricola," suggests that I am "holed up," and as he has the answer all right I will come out of my hole long enough for a visit with my friends. The "hole" is what we call a "stripping room," is 12 by 22 feet in size, is as warm as the average house, and in it, the two boys and I, are handling out our crop of between 7,500 and 8,000 pounds of tobacco. As our average day's work is not 300 pounds, it will be seen that we will be engaged for some time; for we will not get in more than four days a week on account of other duties on the farm.

The break-up in weather caught us with about 300 bushels of corn in the shock, 200 of it in fodder that I let a neighbor have if he would cut up the corn and husk it out. The rest of the crop is safe in the cribs. A few days ago I sold a man 200 bushels at 65 cents a bushel, per 72 pounds in the husk.

There is some fox chasing going on, but us fox chasers seldom if ever catch a fox, and as foxes are getting too numerous for the good of poultry, some farmers are watching for and shooting them.

Skunk trappers are also at work. It is strange how a man, too lazy to take a job of honest labor at \$1.50 a day, will walk 15 or 20 miles on a trap line to catch two skunks a week, and then sell the hides for \$3 to buy whisky at 75 cents a pint—but men will do this very thing. I am opposed to skunk trapping on general principles, as this animal is very useful as an insect eater, and besides, it must take a man who is a very brute to set a steel trap, catch a poor animal in it, and allow that animal to be tortured for hours, perhaps for days.

When I find a steel trap set on my farm, I take that trap to the nearest big stone and mash it up so that it is no longer dangerous. The whisky-drinking trapper is a first-class citizen, when compared with Mrs. Shoddy, or Miss Dadsdollar, who will wear the skins of animals which have been tortured to death.

"Agricola," you had a fine institute at your place when I last helped to hold it, but then these meetings, at even the best points, will fall off in interest sometimes.

As with you, horses are away off in price here. Good heavy horses sell well, up to \$250 for 1,750-pounders, about half that for good horses of 1,150 to 1,300 pounds, and no sale for horses of less than 1,000 pounds. I knew a fine 4-year-old, 1,000-pound mare selling at \$85 three weeks ago, but she was fat, and the others, in thin flesh, could get no offers.

There are lots of apples, potatoes and cabbage in the cellars, the best corn crop in ten years, tobacco a small crop, but selling fairly well, and, best of all, extra good health, both among our citizens and our live stock. With best wishes to all for the coming year!—C. D. Lyon, Ohio.

Money-Saving Fence Catalog Free.

Our readers will notice with interest that the advertisements of the Brown Fence and Wire Co., Cleveland, Ohio, are again in our columns. We are in receipt of a letter from Mr. Brown in which he states that their new 80-page catalog is just off the press, bigger and more beautiful than ever, and that he invites every reader to send in for a copy which he will gladly send them by return mail. This catalog is indeed a complete encyclopedia of every kind of fence and gates that any farmer can possibly use.

By mentioning Coleman's Rural World, and making your request on a post-card, a catalog will come by return mail. Simply address Mr. Jas. Brown, President the Brown Fence and Wire Co., Dept. 16, Cleveland, Ohio. You will also be interested in Brown's new triple angle steel posts which are a new feature in this fine catalog. Send

in your request today before you forget.

Trade Revival in Western Canada.

A general trade revival has been felt in every department of business in the Prairie Provinces. The agriculturists are in better shape than they have ever been before in their lives. No farmers of any country are in better financial condition and in a more general state of prosperity than are the farmers of Manitoba, Saskatchewan and Alberta. The farmers have harvested a record

crop—a crop which enriches them to the extent of something over \$400,000,000.

The condition of western Canada at the close of 1915 is one of optimistic prosperity, backed by the same determination of western people to go on increasing their productivity and maintaining the records which they have already established.

The trade revival of western Canada is the happiest feature in the business survey of the whole Dominion for 1915 and in the outlook for 1916.

Farmers' Classified Department

70,000 PAID CIRCULATION

RATE ONLY TWO CENTS A WORD

Coleman's Rural World has a family of over 70,000 paid in advance subscribers every week. This means that at least 350,000 farm folks are readers of these columns. Figure the cost of sending each of these readers a personal letter each week and then compare that cost with the low rate at which you can reach them ALL through the Classified Columns below. Count up the words in your advertisement, including initials and numbers which count as words, and multiply by two and you will quickly appreciate how low the cost is to reach these 70,000 buyers every week. No advertisement less than 10 cents accepted—and no fakes under any circumstances. Cash must accompany all orders.

ADDRESS,

Coleman's Rural World Advertising Department 718 Lucas Av., St. Louis, Mo.

POULTRY.

Anconas.

SINGLE COMB Ancona cockerels, breeding or exhibiting. P. E. Gregoire, Newton, Illinois. Route 6.

Barred Rocks.

BARRED ROCK cockerels for sale. Frank Miller, Clarinda, Iowa.

BARRED ROCK cockerels; satisfaction guaranteed. Write for free booklet. Sunny-side Poultry Farm, Owensville, Box 22, Mo.

Leghorns.

SINGLE COMB Buff Leghorn cockerels, \$1 each. Mrs. Nic. Faber, R. 2, Remsen, Ia.

PURE-BRED Rose Comb White Leghorn cockerels, \$1 to \$10. Jennie Martin, Frankfort, Kan.

THOROUGHBRED Single Comb White Leghorn and White Orpington Cockerels, \$1.00 each, \$5.00 for six. White Runner Ducks, white egg strain, \$1.00 each, \$10.00 dozen. Beverdale, Appleton City, Missouri.

Orpingtons.

WHITE ORPINGTONS—A few choice cockerels and pullets for sale from my exhibition pens. Dr. S. E. Harley, Centerville, Mo.

WHITE ORPINGTONS, single comb, some fine exhibition stock for sale at very attractive prices. W. G. Langchenning, Jackson, Mo.

Rose Comb Reds.

ROSE COMB REDS, exclusively eight years a breeder, choice lot of cockerels for sale, price reasonable. Harly Case, Quincy, Ill. Route 5.

Several Varieties.

FOR SALE—White Wyandottes, White Rocks, hens, pullets and cockerels. Prices, \$1.00 each. J. Wolf, Wheeler, Ill.

Turkeys.

NARRAGANSETT TURKEYS, large bone, vigorous, healthy birds; toms, \$5.50; hens, \$3.50. Mrs. R. O. Lane, R. 2, Mt. Sterling, Kentucky.

LIVE STOCK.

RED POLLED BULLS for sale. P. J. Murta, Cuba, Missouri.

BERKSHIRE GLTS, 200 pounders, \$20. H. C. Luttrell, Paris, Mo.

REGISTERED Guernsey bulls, 14 months old. Chas. Ihlenfeld, Luxembourg, Wis. R. No. 2.

BERKSHIRES, pedigreed, prolific, the big kind. Pigs, \$10 each. H. H. Shepard, Pacific, Mo.

HOLSTEINS—Registered or grades, all ages; low prices. Satisfaction guaranteed. John Lockwood, Marengo, Ia.

DUROC-JERSEY HOGS, best of breeding; good individuals. Write us your wants. Prices right. Wilcoxon & Porter, Bowling Green, Mo.

O. I. C. and Chester White boars, bred sows, gilts, young herds a specialty. No kin; prolific; large kind. Write, F. E. Ruebush, Sciota, Illinois.

REGISTERED STOCK—Red Polled cattle, Berkshire hogs and White Rock poultry. Stock for sale at all times. Cedar Valley Farm, Leslie, Mo.

DUROC-JERSEY HOGS—Bred sows, bred or open gilts; service boars; pigs, both sexes, any age, for sale. All immune. Write me your wants. Satisfaction guaranteed. Norman Porter, Bowling Green, Mo.

STEERS FOR SALE—One load of Short-horns, \$50 lbs.; two loads of Hierford's, \$60 lbs.; one hundred head Shorthorns, \$50 lbs. Know of others. Write at once, stating your wants. W. W. Dyer, Ottumwa, Ia.

DOGS, RABBITS AND PET STOCK.

BELGIAN HARES, \$3.00 per pair. W. H. Cokerley, Harrisville, W. Va.

FOX, COON, SKUNK and rabbit hounds, broke to gun and field and guaranteed. Fox and coon hound pups, \$5.00 each. Buy your hound now and be acquainted by hunting season. Stamp for photos. H. C. Lytle, Fredericksburg, Q.

FARMS AND LANDS.

CALIFORNIA FARMS for sale; write for information. E. R. Waite, Shawnee, Okla.

MUST SELL, 240 acres all bottom land, well imp. Young's Realty Co., Howard, Kan.

BEST BARGAINS in Eastern Kansas, 150 farms for sale. Write what you want first letter. G. W. Depue, Parker, Kansas.

1,800 ACRES coal, oil, farming, pasture land and leases. \$3 to \$15 per acre. No trades. John Cavanagh, McAlester, Okla.

CALIFORNIA little suburban farms for sale, suitable for poultry, fruit and garden. Easy payment. Write, E. R. Waite, Shawnee, Okla.

FOR SALE—Good Southwestern Oklahoma improved; corn, wheat, cotton and alfalfa farms; easy terms; bumper crops; some exchanges. Box 233, Mangum, Ok.

YOU CAN GET free ranch in South America by assisting in paying expenses to secure million acre concession. Rich soil, fine climate. Highest references. Map 25c. Box 492, Sawtelle, Calif.

HOMES FOR HOMELESS. We sell farms on your terms. You share in profits of company. Send for free literature. Florida Farm and Home Company, Johnstown, Florida. Dept. C. Agents wanted.

THE BEST 80-acre farm in Fannin Co., 6 miles from Bonham, on public road. Have good improvements. Orchard and lots of water. No waste land. \$75 per acre. J. T. Owens, Bonham, Tex. R. 2.

KUDZA; great new perennial legume hay, grow like cowpeas, but last ten years, three cuttings; day to cure; shed no leaves. Richest feed; fed green or dry. Highly recommended. Pamphlet free. Kudza Farms, Semmes, Alabama.

SEED AND NURSERY STOCK.

SWEET CLOVER, white and mammoth yellow. Write, Mrs. J. T. Mardia, Palmouth, Ky. R. 4.

FERRIES.

FERRIES—Single pairs and dozen lots. Stamp for price list. Ella Jewell, Spencer, Ohio.

HELP WANTED.

WISH TO HEAR at once from reliable single man, capable of managing large ranch successfully. Mrs. Ward, Box 357, Valley, Neb.

THOUSANDS men and women wanted. U. S. Government jobs. \$75.00 month. Rapid advance to \$150 month. Vacations. No layoffs. Short hours. Common education sufficient. "Pull" unnecessary. Write immediately for free list of positions now obtainable. Franklin Institute, Dep't. F 167, Rochester, N. Y.

AGENTS.

TREES AT WHOLESALE. Catalog Free. Agents wanted. Peyton Nurseries, Booneville, Mo.

WANTED—Man to sell trees, shrubs, roses, berry bushes. Permanent. Brown Brothers Nurseries, Rochester, N. Y.

MEN WANTED in each county with rig or auto to engage in a profitable, dignified business. Big money and easy work selling the famous Seelye Products, Wasa-Tum, Fro-Zona, etc. Needed and wanted in every home. They sell themselves. The Seelye Company, 440 Seelye Bldg., Abilene, Kans.

BEES AND HONEY.

HONEY—Pure extracted—1 cans of 50 lbs. each, light amber, \$9.50. Amber, \$8.50. Also bees. John Ruyta, Carlsbad, N. Mex.

MISCELLANEOUS.

SEND \$1.00 FOR RECIPE to cure wind-broken horses to Box 261, Bamberg, S. C.

FINE CHEWING and smoking tobacco. Three years old. Send stamps for samples. W. L. Parks Tobacco Co., Adams, Tenn.

GROW MAMMOTH RUSSIAN snowflakes. Most profitable crop and easy grown. Sample, prices and list of users and buyers on request. The Enterprise Farms, Box 75, Eardwell, Ky.

KENTUCKY'S BEST Natural Leaf Tobacco, by parcel post prepaid, 4 lbs. for \$1.00; 10 lbs. for \$2.00. Special prices on larger quantities. State if you want smoking or chewing. E. Rosenblatt, Haverhill, Ky.

Get our big new 1916 Combination Offer on Progressive Incubators and Brooders. Wonderful bargains—built from best materials with latest improvements. Only machine with hundreds of dead air cells to protect eggs against sudden changes.

155 EGG

TAKES GUESSWORK OUT OF HATCHING

Many users report a chick from every hatchable egg. Easy to run. Built of genuine California Redwood; Copper Hot Water Heater; Double-dial Regulator; Double Doors; Safety Lamp; Tester, etc.

\$7.85 LOWEST PRICE YET FOR BIG 155 EGG INCUBATOR

No extra. Incubator and Brooder both \$9.95. Freight paid east of Rockies. Money back with 8% interest if machine doesn't make good. Order from this lead or get Special 1916 Combination Offer and Free Poultry Book showing why the Progressives beat them all for results.

Progressive Incubator Co.
Box 239 Racine, Wisconsin

OPEN A FARM STORE

WE supply goods and we pay the freight. No house needed at start. Get your own supplies at wholesale and make money selling to others. Our wholesale prices will open your eyes. Handle everything from a box of notions to suit of clothes.

AND CHAIN STORES CO., Box 182 Richmond, Va.

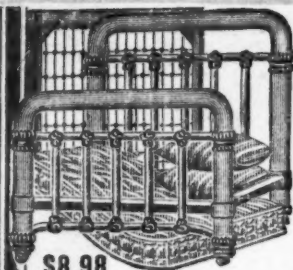
WE PAY THE FREIGHT

BRACELET AND RING FREE

This beautiful Bracelet is all the rage. Adjustable to any wrist, gold plated throughout. Engraved links. Set in fancy engraved band ornament with large ruby eye. Ring is set with 8 brilliants. Very handsome. Free to all who order. Only 20 of our magnificent art and religious pictures at 10c each. We trust you will picture yourself. Give an extra gift of 40 beautiful postcards for postage. Send name today.

The Supply Co., Dept. B.W. 716 Lucas Ave., St. Louis

HARTMAN'S SPECIAL



5-Piece, 2-Inch Post Steel Bed Outfit

No. MK148. Complete bed outfit, consisting of elegant 2-in. continuous post steel bed with 4-in. fillers in artistic design, height head end 62 in; link fabric, steel frame bed spring; cotton top, fibre filled mattress and two 4 1/2 lb. selected hen feather pillows 18x23 in. All sizes, 3 ft., 3 ft. 6 in.; 4 ft. or 4 ft. 6 in., full size. Colors: White, Pea Green or Vernal Green. Think of being able to order this elegant bed outfit—bed, springs, mattress and pillows—without sending a cent in advance and sleeping on it 30 nights before you even decide to keep it. You couldn't duplicate this bed outfit anywhere else at anything near our price, even if you paid all cash and we give you practically your own time to pay. Price, \$8.98.

\$8.98

before you even decide to keep it. You couldn't duplicate this bed outfit anywhere else at anything near our price, even if you paid all cash and we give you practically your own time to pay. Price, \$8.98.

Hartman's Dresser Bargain

No. MK180. A remarkable offering of a beautiful dresser constructed of selected hardwood to which is applied a finish in imitation of quarter-sawn oak that closely resembles the real wood. Top of base measures 48x19 inches. It has French bevel plate mirror 24x20 inches in size, supported by strong standards. Top of mirror frame has neat carving. There are two small drawers at top of base, below which are two full length drawers, all fitted with wooden drawer pulls. When you see it you will be amazed that such an elegant piece of furniture, handsome enough for any home, can be manufactured and sold at the price we offer it. Compare it with dressers costing a great deal more and you will at once see that it is far superior in appearance, style, workmanship and finish. A rare value at our price, \$9.68.

\$9.68

Hartman's Library Table Bargain

No. MK179. Magnificent Library Table constructed of selected hardwood to which is applied a finish in imitation of quarter-sawn oak that so closely resembles the real wood that it requires an experienced eye to detect the difference. Comes in golden oak or fumed finish. Has square edge top, 48x28 in., large drawer for papers or magazines; 2 1/2 in. square corner posts fitted to heavy scroll feet, and strong lower shelf. Not only is it strong, solidly built, durable table but it is also an unusually handsome piece of furniture. You will be proud to own it. It is made in the very best way and it is a great value at this remarkably low price of \$6.95.

\$6.95

at this remarkably low price of \$6.95

Washing Machine Bargain

No. MK105. Tub is 8 shirt capacity. Made of Louisiana red cypress, corrugated on inside for effective rubbing surface. Finished natural color and bound by three steel hoops. Four pronged 10 inch cypress dasher block, cannot slip or crack. Gearing is durable; roller bearings. Here is a machine that will take the drudgery out of wash day for it is very easy to turn. Tub is supported by three legs bolted into iron sockets. Does not tear clothes. Do not tire yourself out another day rubbing clothes on an old style wash board. How can you afford to when you can buy this easy-running, durable machine at the low price of \$4.50.

\$4.50

Hartman's Collapsible Go-Cart Bargain

No. MK111. New all steel, collapsible Go-Cart, folds completely with one motion. Has heavy tubular steel pushers; beautiful ebony handle with silver nickel corners; 3 bow hood; 10 inch wheels with 1/2 inch cushion rubber tires; metal fenders; 3 bow footwell hood; improved spring construction which guarantees maximum comfort for baby; back adjusts to several different positions. Price includes removable storm front with large mica window that makes it easily convertible into a bad-weather cart. Easy riding, too, as the rubber tires take up the shock and jar when going over rough places. Give the baby real comfort by ordering at once one of these fine Go-Carts. This is the greatest value ever offered by anyone. Price \$6.98.

\$6.98



3-Piece Library Set Bargain

No. MK184. Made of choice quality solid oak, fumed finish. Table has large 36x24 in. top, fitted with 2 roomy book ends, with large 7 in. connecting shelf. Panels at sides of book ends match panels on chair and rocker. Chair and rocker made with heavy 2 inch front posts fitted to genuine quarter-sawn oak arms, 3 1/4 inches wide. Seats and backs upholstered with imitation Spanish leather over wood fibre and soft cotton jute, supported by six heavy steel reinforced springs. Chairs 49 inches high; seat 23x19 inches. Price, Complete Set, \$12.65.

\$12.65

Hartman's Solid Oak Kitchen Cabinet Bargain

No. MK178. Elegant Sanitary Comfort Kitchen Cabinet of Solid Oak. Base has whitewood table top 48x36 in., smoothly sanded; convenient sliding bread board; cutlery drawer; large utility drawer for bread or cake, and roomy utensil cupboard with pan rack on inside of door. Top has large china cupboard with two artglass doors; tilting four bin, 48 pound capacity, with sifter and artglass front, sliding sugar bin, and two spice drawers. Cabinet stands 63 inches high and is finished in rich golden color. No kitchen should be without this beautiful and useful piece of kitchen furniture. Price, \$11.78.

\$11.78

Solid Oak Dining Table Bargain

No. MK181. Beautiful solid oak dining table which can be ordered in Golden Oak or fumed finish. Has large 48 inch top which extends to 6 feet when opened; 4 inch rim; heavy octagonal shape pedestal fitted to 24 inch platform which rests upon four Colonial scroll legs. It is excellently finished throughout. This is an elegant Dining Table, one that will grace any dining room. A real bargain at our remarkably low price of only \$11.95.

\$11.95

Comfortable Rocker Bargain

No. MK176. A large, comfortable Rocker at a bargain price. Made of solid oak in golden finish in a very choice design. Is upholstered with imitation Spanish brown leather on seat and back. Seat has 4 springs, stuffed with tow and cotton. Front and back posts are hand-carved. Seat front plated and back is button tufted. Strong posts and runners. Here is a rocker that is constructed for solid comfort—and it is a handsome piece of furniture as well—a rocker that will grace any parlor or living room. You can make no mistake by ordering it because if you do not think it the biggest value for the money you ever saw, you are privileged to return it at our expense. Price, \$3.57.

\$3.57

Hartman's "Wonder" Vacuum Sweeper Bargain

No. MK182. Here's a wonderful value in an article needed in every home. An easy running, silent vacuum sweeper that is offered at a price lower than ever before asked for an article of this high quality. Has noiseless fibre bearings and bellows lifting rods, steel frame dust bag, wide opening dust pan, pressed steel top, four drive wheels on brush, 3 bellows and 12 inch nozzle. Wheels are flanged to avoid tire trouble. Is nickel trimmed. Fully guaranteed. Has brush adjustment—operated by foot. This is a vacuum sweeper that should be in every home. Will keep your rugs and carpets absolutely free from dust and germs, and is so easy to operate that its more like play than work. None of the dust of ordinary sweeping. You don't have to follow up your work with a dust rag. Order one today at the unheard of price of only \$3.97.

\$3.97

10-Piece "Hartman Longware" Aluminum Kitchen Set

No. MK183. Comprises lipped preserving kettle, 5 qt. capacity, interlocking ears, 2 qt. lipped sauce pan, heavily tinned steel handle, 1 1/2 in. strainer ladle with 4 1/2 in. bowl, 1/2 pt. measuring cup, graduations stamped 2 pie plates, 10 in. in diam., 2 qt. coffee pot, seamless welded spout, enameled wooden handle and cover knob, 15 qt. boiling pan, 2 pt. ladle, 1 pt. combination strainer funnel. Price \$3.76.

\$3.76

No Money In Advance

HERCULES FLINT SURFACED ROOFING

Most Durable for Any Climate
Made of best quality, long fibre wool felt. Thoroughly saturated with pure asphalt, surfaced with very fine, sharp particles of flint crystals thoroughly imbedded under enormous pressure. The strongest, most durable prepared roofing made. Fire resisting and water tight. Each roll is complete—32 in. wide, contains 108 square ft. (enough to cover 100 square feet.) Nails and cement included. No skill required to lay.

No. MK136—1 ply, 65 lbs. guaranteed 5 years.....roll \$1.15

No. MK137—2 ply, 65 lbs. guaranteed 8 years.....roll \$1.58

No. MK138—3 ply, 75 lbs. guaranteed 12 years.....roll \$1.98

Guaranteed Rex-Kote Ready Mixed Paint

Rex-Kote Ready Mixed House Paint. Made from finest, purest ingredients, mixed by machinery. Guaranteed against peeling, blistering, chalking or rubbing off and to cover more surface per gallon, make a better finish and last longer than any other paint.

Guaranteed Rex-Kote House Paint. \$1.02

As low as, per gal. \$1.02

Rex-Kote Mineral Barn Paint—can't be equalled for covering and wood preservative qualities. Two bright colors—brown and red. As low as, per gal. 84c

Rex-Kote Roof Paint—made from natural asphalt, linseed oil and other ingredients that make an absolutely water tight, acid proof paint. As low as, per gal. 52c

FREE Roofing Book

Your name and address on a postal brings you this big handsome book showing all colors of Rex-Kote Paints and complete line of Free Samples of Hercules Roofing. Write today.



Never before has it been possible for Farmers to completely furnish their homes with Furniture, Rugs, Carpets, Sewing Machines, Tableware, etc., and buy Paints, Roofing, Engines, Cream Separators, Incubators and other needed articles for farm use, without paying a cent in advance! Never before has any Manufacturer or Mail Order House offered the amazingly liberal, wide-open credit terms equal to Hartman's. We say—"Farm Folks, buy what you want—take a year to settle."

Pay in 3, 6, 9 and 12 Months

HARTMAN knows that Farmers pay their bills promptly when they sell their crops and stock. So the HARTMAN SPECIAL FARM CREDIT PLAN was originated as a convenience to you Farm Folks. Your credit is good with Hartman! Use it. With \$10,000,000 capital, over 1,500,000 satisfied customers and an organization that has grown for 60 years to its present stupendous proportions, why should HARTMAN not be glad to accommodate his host of Farm Friends? We are glad to do it—and invite you right here and NOW to order direct from this page—NOW! Order any or all of the 14 specimen selections direct from this page—NOW! Simply write letter stating what you want. Send no money—not a cent in advance. HARTMAN will ship the goods without delay—no deposit required—no C. O. D.—no "red tape"—no security—no interest to pay.

Use the goods for 30 days and if they fail in any way to come up to your expectations, return them at Hartman's expense. If they prove the biggest bargain values you ever heard of—keep them and make your first payment in three months; balance in 3, 6 and 9 months thereafter, giving you a whole year to pay—WITHOUT INTEREST.

FREE Hartman's Mammoth Bargain Catalog

Here is the biggest array of genuine bargains ever collected between the covers of a book! Every page teems with wonderful money-saving opportunities. Hartman brings this amazing selection—greater than the combined stocks of probably a score of the largest city Home Furnishing Stores—right to you for quiet selection in your home.

Pick out everything you need—Furniture, Carpets, Rugs, Curtains, Beds and Bedding, Clocks, Jewelry, Watches, Stoves, Refrigerators, Sewing Machines, Dishes, Washing Machines, Engines, Cream Separators, Incubators, Brooders, etc. You will find your every household need provided for at stupendous price reductions—all sold on HARTMAN'S Special Farm Plan—no money in advance—with a whole year to pay! WRITE FOR THIS MAMMOTH MONEY-SAVING TODAY! Ask for Catalog No. F. 217.

SAVER TODAY! Ask for Catalog No. F. 217.

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SAVER TODAY! Ask for Catalog No. F. 217.

Seamless Brussels Rug Bargain

No. MK177. Magnificent, extra heavy, seamless Brussels rug in two sizes, woven of selected yarns in a very attractive pattern of semi-oriental design that will look well in any room in your home. Colorings are of Tan, Red, Green and Brown harmoniously blended. This is truly a remarkable rug bargain. It is so well made and has such good heavy body that it will give you many years of satisfactory service. Were you to buy a rug of this quality elsewhere, even though you paid all cash, it would cost you a great deal more than the low, easy-term price we ask. Just order this rug and see how delighted you will be with it. Not a cent in advance, remember, and if you decide to keep it after 30 days examination, you have practically your own time to pay.

Size 8 ft. 3 in. x 10 ft. 6 in. Price.....\$12.74

Size 9x12 feet. Price.....\$13.96

Price.....\$13.96

Price.....\$13.96

Price.....\$13.96

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HARTMAN COMPANY

4060 LaSalle Street, Chicago, Ill.

MAIL COUPON NOW

HARTMAN COMPANY

4060 LaSalle St., Chicago, Ill.

Please send me your Mammoth Bargain Catalog

Free. (In ordering goods direct from this advertisement write letter giving number and name of article wanted.)

Name.....

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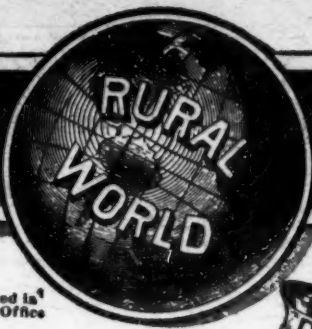


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HORSES

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ETC.

OLDEST AGRICULTURAL AND LIVE STOCK JOURNAL IN THE MISSISSIPPI VALLEY

95th Year.

ST. LOUIS, MO., JANUARY 20, 1916.

Volume LXIX. No. 2.



The first Hatch